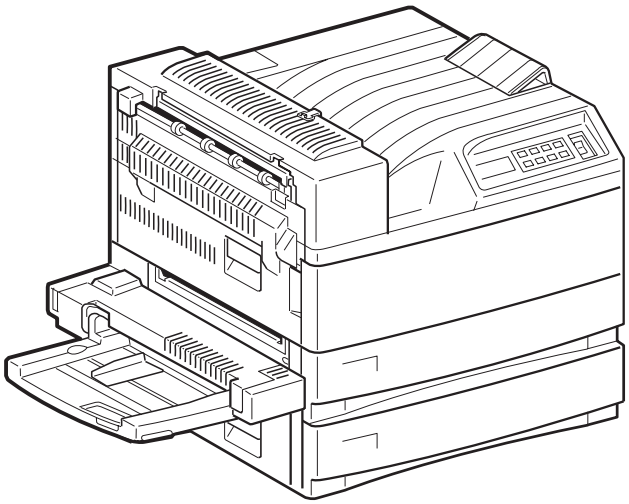
Compuprint PageMaster 450 User Guide



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How This Manual is Organized

This manual consists of 7 chapters and 5 appendices as follows:

Chapter 1 Unpacking and Installing Your Printer

Describes a suitable location for your laser printer and how to unpack and install it. Be sure to read this chapter before setting up the printer..

Chapter 2 Printer and Options Parts and Functions

Describes the parts of the printer and paper handling options and their functions. A discussion of the paper path is also included. Also describes all available options and consumables for your printer and their respective part numbers.

Chapter 3 Understanding Paper, Paper Paths, Paper Delivery and Paper Loading

Provides information on paper qualities, paper size requirements, paper paths, paper output delivery and loading of paper in your printer and options.

Chapter 4 Understanding and Navigating the Control Panel Menus

This chapter explains the control panel and its functions, and also demonstrates how to navigate through the control panel menus and submenus that allow you to view and change the printer settings.

Chapter 5 Printer Consumables, Cleaning and Maintenance

Describes how to handle and replace the EP cartridge, replacement of transfer and feed rollers and performance of other steps as necessary for day-to-day operation of your printer..

Chapter 6 Troubleshooting

Explains procedures to isolate and solve problems that may occur during use of your printer. Clearing paper jams and detailed troubleshooting of LCD error messages are discussed in this chapter. Troubleshooting the Ethernet network interface is also discussed in this chapter.

Chapter 7 Using DRAM DIMMs, FLASH DIMMs and Power-on Files

This chapter describes the procedures for installation of DRAM memory DIMMs and FLASH DIMM modules. Downloading software to the FLASH DIMM module is also discussed in this chapter.

Appendix A General Information

Provides information on how to contact Compuprint for technical support, service and repair issues, and also provides part numbers for the printer, options, and consumables.

Appendix B Safety Notes and Regulatory Compliances

Describes cautions to take when installing, transporting, or operating the printer. Also includes applicable regulatory compliances of your printer.

Appendix C Printing Font Summaries

This appendix explains the procedure for printing summaries of PCL or PostScript fonts installed in your printer..

Appendix D Frequently Used Ethernet Commands

This appendix lists some of the most frequently-used commands of the Print Server command set. More information about the command set, including additional options, can be found in the Ethernet Network Interface Manual on the Electronic Library CD-ROM.

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Preface

Preface

In this Chapter . . .

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- "Features" on page 2
- "Standard Configurations" on page 3
- "Manual Conventions" on page 5

Welcome

Thank you for selecting the Compuprint PageMaster 450 laser printer. In this manual you will find important information regarding operation and care of your printer. Please read this manual in its entirety and keep it at hand for later reference.

Features

Your laser printer comes with the following features.

- High-speed and high-quality printing

  The PageMaster 450 has paper output of 45 pages per minute with a resolution of up to 600 x 600 dpi, assuring razor-sharp output of graphics and text, even at very small point sizes.

- Two integral interfaces

  Base configurations of the PageMaster 450 has two integral interfaces: a bidirectional parallel port and an Ethernet 10/100BaseT port.

- Flexible Paper Source and Delivery

  The printer comes standard with two 500-sheet universal paper cassettes and the Multi- Bypass Feeder. An optional 2500-sheet High Capacity Feeder (HCF), Envelope Feeder, and Duplexer can be installed. The printer also features the following paper output options—Face Down Output Tray, Face-Up Tray, and Finisher/Stapler.

- Ergonomic operation

  The easy-to-read display clearly shows the operation status of the printer. Ergonomically shaped front-panel push-buttons are used to control all functions.

- User-friendly EP cartridge

  The integrated EP cartridge contains both the toner and the photosensitive drum in a single housing, which makes it easy to replace the cartridge.

- Continuous printing of up to 3550 sheets

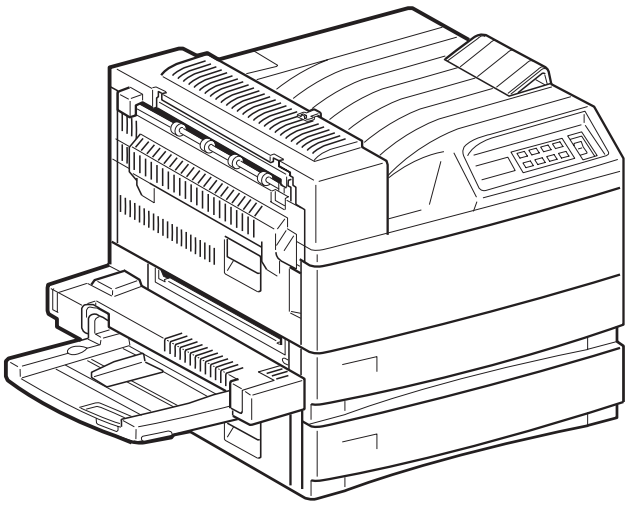
  The two standard paper cassettes hold about 500 sheets of paper each and the multi bypass feeder holds 50 sheets. Trays 3, 4, and 5 in the optional HCF unit provide a total of 2500 sheets. Together they allow continuous printing of up to 3550 sheets.

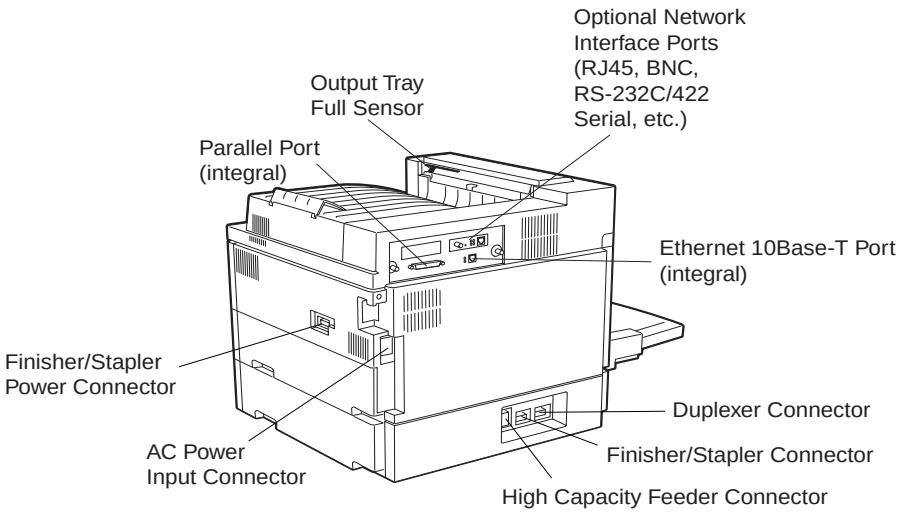
Standard Configurations

The Compuprint PageMaster 450 printer can be ordered in the following two standard configurations:

Base Configuration (for table-top use)

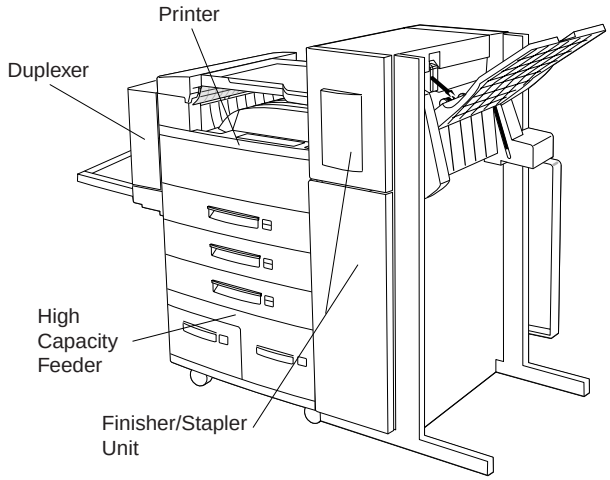
- **Memory:** 64 Mbytes RAM Memory
- **Resolutions:** 300 x 300 dpi and 600 x 600 dpi
- **Paper Input:** Two 500-sheet universal paper trays and one 50-sheet Multi-Purpose Bypass Feeder for paper, transparencies, envelopes, and other non-standard paper sizes
- **Paper Output:** One 500-sheet face down tray
- **Interfaces:** Bidirectional 1284 Parallel Port (Type-B); Ethernet 10/100BaseT Port
- **Printer Languages:** Adobe PostScript 3 and PCL6





Extended Configuration (floor-standing)

- **Memory:** 64 Mbytes RAM Memory
- **Resolutions:** 300 x 300 dpi and 600 x 600 dpi
- **Paper Input:** Two 500-sheet universal paper trays and one 50-sheet Multi-Purpose Bypass Feeder
- **Paper Output:** One 500-sheet face down tray
- **Interfaces:** Bidirectional 1284 Parallel Port (Type-B); Ethernet 10/100BaseT Port
- **Printer Languages:** Adobe PostScript 3 and PCL6
- **Paper Handling Options:** Duplexer, High Capacity Feeder (includes one 500-sheet tray and two 1,000-sheet trays), Finisher/Stapler Unit (supports 3,000 sheets, offers 3-hole punch capability and staples up to 50 sheets). Stapling and 3-hole punch functions can be used in conjunction to provide a 3-hole punched and stapled finished document of up to 50 sheets.



NOTE: The Compuprint PageMaster 450 Bundle printers come standard with Ethernet, Duplexer, High Capacity Feeder, and the Finisher/Stapler Unit.

Manual Conventions

NOTE: Notes contain tips, extra information, or important information that deserves emphasis or reiteration.

Caution: Cautions present information that you need to know to avoid equipment damage, process failure, or extreme annoyance. Pay special attention to these sections and read them fully before operating the printer. Compuprint will not be responsible for any problems or damage arising from improper use.

WARNING! Warnings indicate the possibility of personal injury if a specific procedure is not performed exactly as described in the manual. Pay special attention to these sections and read them fully to prevent possible injury.

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Chapter 1

Unpacking and Installing Your Printer

In this Chapter . . .

- "About this Chapter" on page 1-2
- "Installation Precautions" on page 1-2
- "Unpacking the Printer" on page 1-4
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- "Turning the Printer Off" on page 1-23

About this Chapter

Describes a suitable location for your laser printer and how to unpack and install it. Be sure to read this chapter before setting up the printer.

Installation Precautions

Before unpacking your laser printer, it is recommended that you read the following to assist locating a suitable spot for your new laser printer. To make optimum use of the printer, observe the following precautions when locating the printer.

Environment

WARNING: The installation surface must be stable and very sturdy to support the considerable weight of the printer. If the printer falls over, there is a severe risk of injuries.

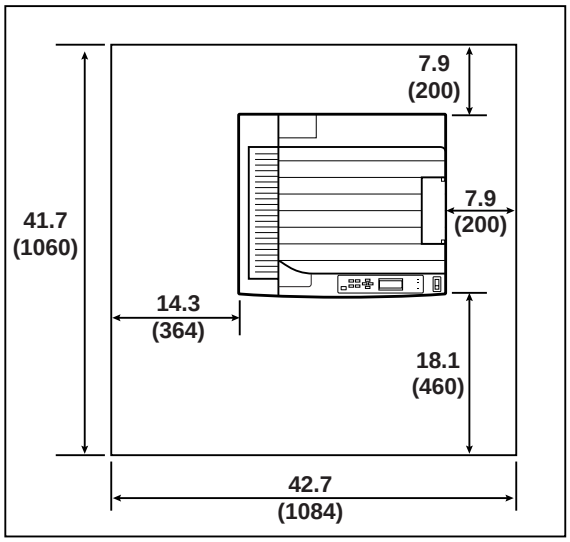
- Place the printer on a horizontal, sturdy and stable surface. The printer weighs about 106 lbs. (48 kg) and may cause injury if it falls over.
- Always place the printer under the following conditions:
  Temperature: 50º to 95º F (10 to 35º C)
  Humidity: 15 to 85% (non-condensation)
- Be sure to keep the temperature to below 82º F (28º C) if the humidity is 85%

  If the temperature changes drastically from a cold environment to a warm environment, condensation may develop inside the printer and cause print problems. Therefore, be sure to let the printer rest for some time to adjust to the new temperature.
- Do not subject the printer to direct sunlight or a malfunction may result.
- Do not place the printer in a location with high temperature and humidity, poor ventilation, or high level of dust, otherwise a fire hazard or electric shock may result.
- Do not place the printer near heaters or similar objects, otherwise a fire hazard may result.
- Never block the ventilation openings of the printer, otherwise the internal temperature will build up and cause a fire hazard.
- Do not place the printer near alcohol, benzine, or other volatile and flammable materials, or a fire hazard may result.

Space requirements

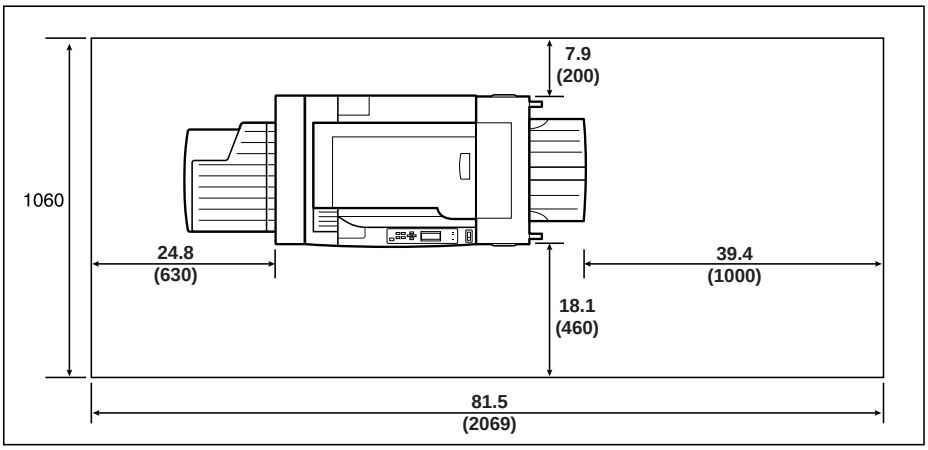
CAUTION: Be sure to leave ample space between the ventilation openings on the printer and the nearest wall or other surface, otherwise overheating may occur leading to a fire hazard. For easy operation, maintenance and replacing of consumables, you should also leave the clearances shown below around the printer. Installation of the printer should be carried out by qualified service personnel.

Top View of Printer (standard configuration)



Measurements in inches (mm)

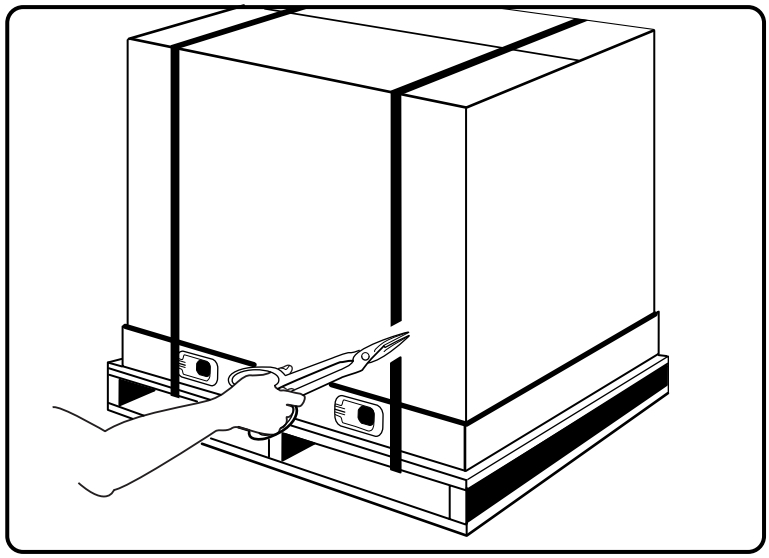
Top View of Printer (when options are installed)



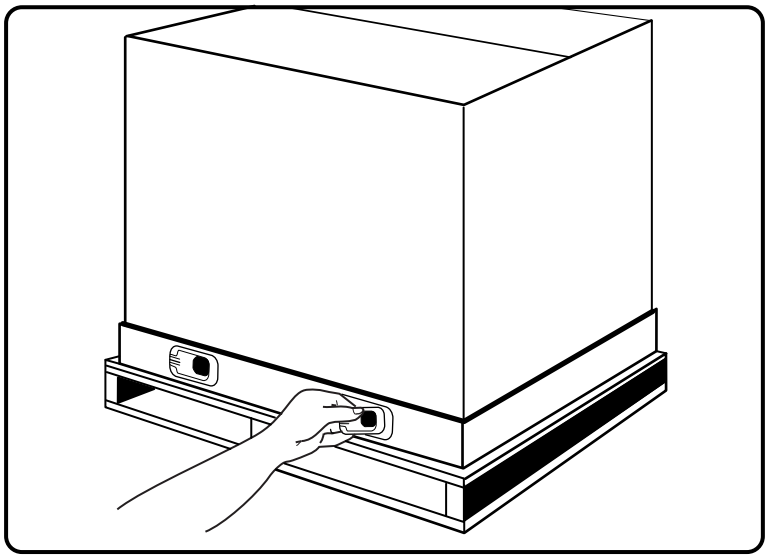
Measurements in inches (mm)

Unpacking the Printer

1. Cut the shipping straps off the exterior carton.



2. Remove the four plastic inserts at the base of the shipping container by pulling on the tabs of each insert. Plastic inserts should be completely removed.



3. Lift the shipping carton up and away from the printer.
4. Remove the plastic bag and any shipping tapes affixed to the printer.

5. Refer to the cautions below on how to carry the printer. Then, with the assistance of another person, lift up the printer and place it on the floor.

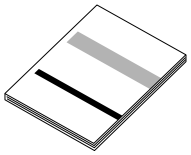
WARNING:
1) This printer is very heavy. The weight of the main unit without paper cassette, consumables, and paper is about 106 lbs (48kg). Never attempt to lift the printer by yourself. The printer should always be carried by two persons.
2) To carry the printer, grasp the four bottom corners from the right and left sides, not from the front (where the control panel is located) and back sides. Never try to lift the printer while holding any part other than the bottom corners otherwise there will be a severe risk of injury if the printer is dropped.
3) When lifting the printer, correct posture is important to prevent injuries.

6. Relocate the printer to a flat and sturdy surface meeting the "Location and Environment Precautions" on page B-3.

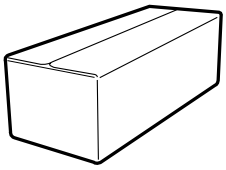
NOTE: Save the carton and packing materials for later use in case you need to ship the printer at a later time. It is particularly important that you save the wooden shipping pallet.

CAUTION: Never attempt to ship your printer without using the wooden pallet. Severe damage may occur.

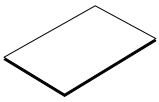
When you unpack the printer, make sure that all the items shown below are included. If any items are missing or damaged, contact your point of purchase.



Compupint PageMaster 450 Installation Guide

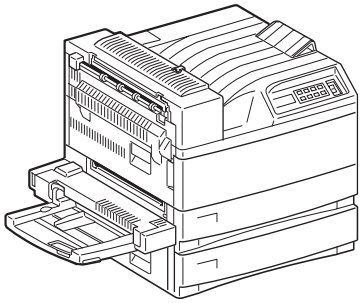


EP Cartridge

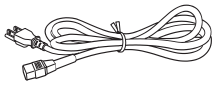


Paper tray size labels

The Compuprint Electronic Library CD-ROM



Printer main unit



Power cord

RCS (Remote Control Software) CD-ROM

Installing the EP Cartridge

Before installing the EP cartridge, see the following precautions. Also, read "Chapter 5 Printer Consumables, Cleaning and Maintenance" for more information on the EP cartridge.

Handling Precautions

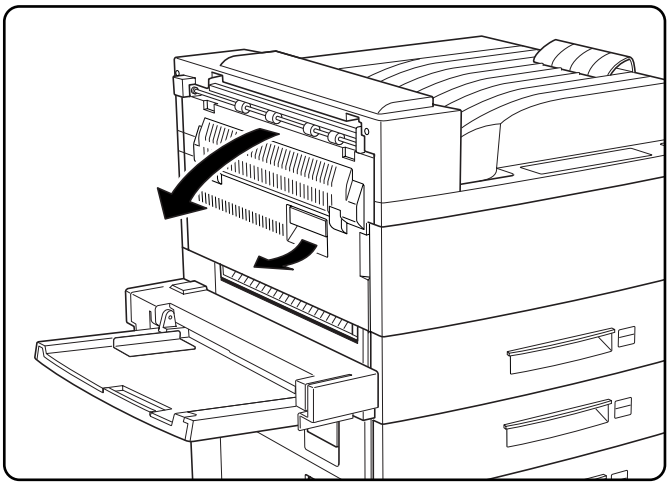
- Do not expose the cartridge to direct sunlight or other strong light sources.
- Do not carry out the procedure in a brightly lit location, and complete the installation procedure as quickly as possible (within about 5 minutes).
- When the EP cartridge is removed from the printer, immediately put it back in its original packing or wrap it with a thick lint-free cloth.
- If the EP cartridge is moved from a cold location to a warm location, let it rest for 1 hour or more before using it.
- Do not turn the cartridge over and do not stand it on its end.
- Toner is not harmful to the human body, but if some toner has come into contact with your skin, you

can wash it off with warm water and soap. If toner gets on your clothing, you should try to immediately blow it off with compressed air.

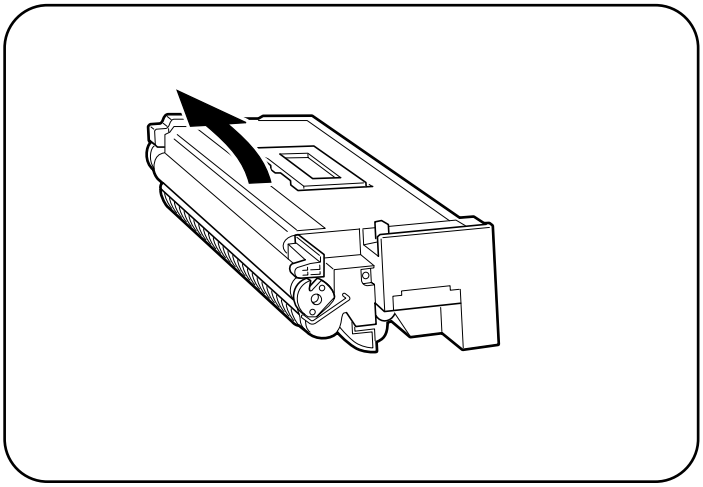
- After removing the sealing tape, do not shake the EP cartridge.
- The drum shutter protects the photosensitive drum from external light. Do not open the drum shutter by hand.
- Never touch the surface of the photosensitive drum.

For standard configuration

1. Hold the latch and open the upper left cover.

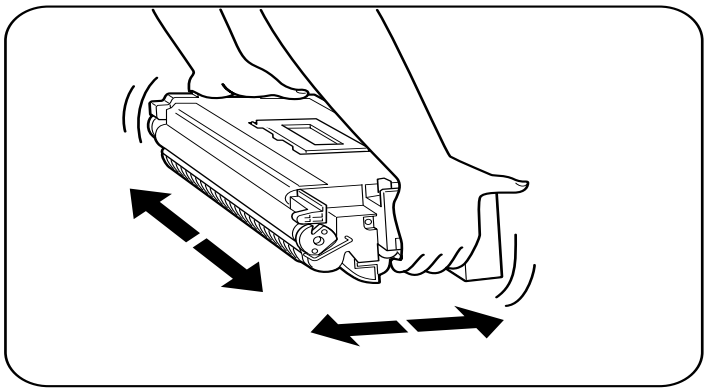


2. Remove the EP cartridge from the packing carton, and pull out the protective paper sheet from the drum shutter.

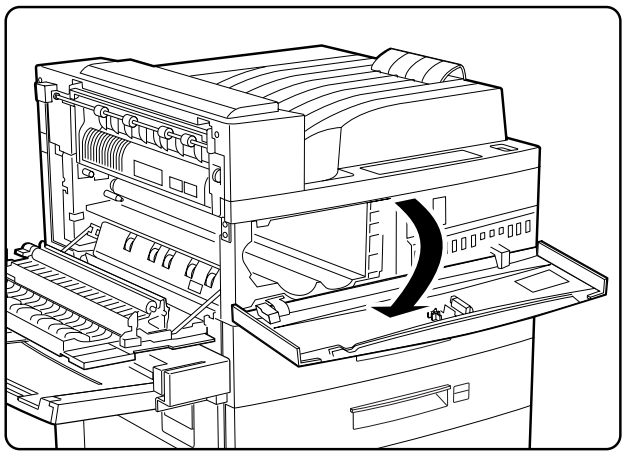


3. Hold the EP cartridge horizontally and gently shake it 5 to 6 times to evenly distribute the toner inside. Uneven toner distribution may degrade print quality. If the toner has not been properly freed by shak-

ing the cartridge, a noise may be heard when turning on the printer and the EP cartridge may be damaged.

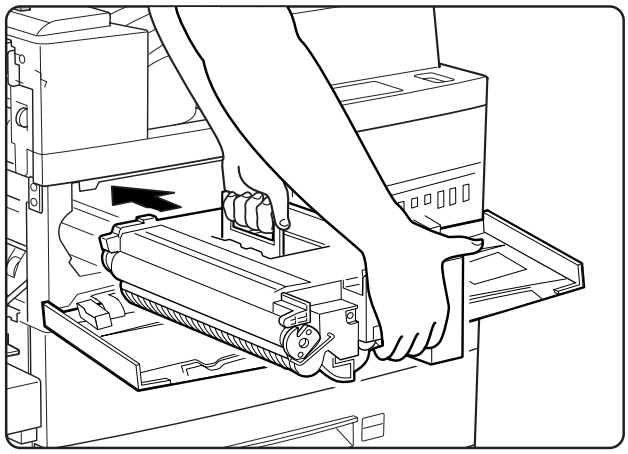


4. Open the front cover as indicated.



WARNING: Never touch the fuser area (where a label indicating high temperature is located). Burns may result.

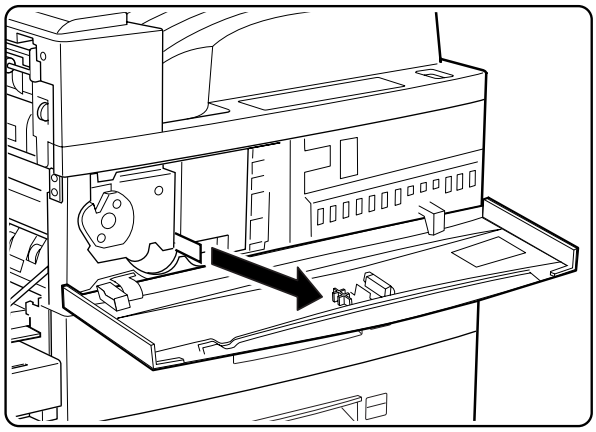
5. While holding the orange handle with one hand, gently push the cartridge all the way into the printer.



I

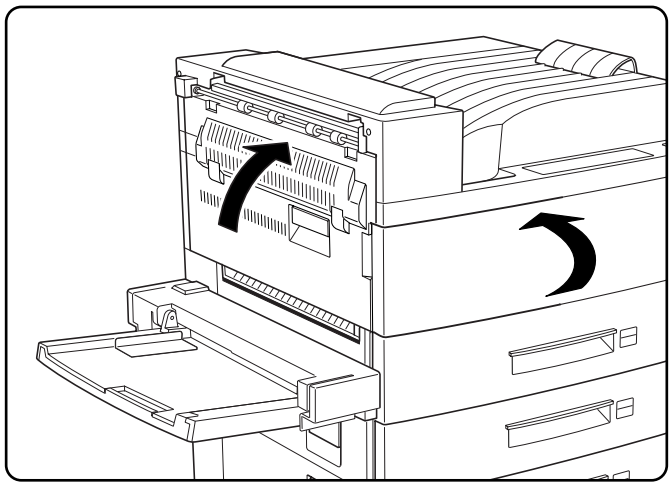
CAUTION: Do not touch any parts inside the printer. Make sure the cartridge is seated properly.

1. Gently pull out the sealing tape in the direction of the arrow.



NOTE: If the tape is pulled out at an angle, it may break.

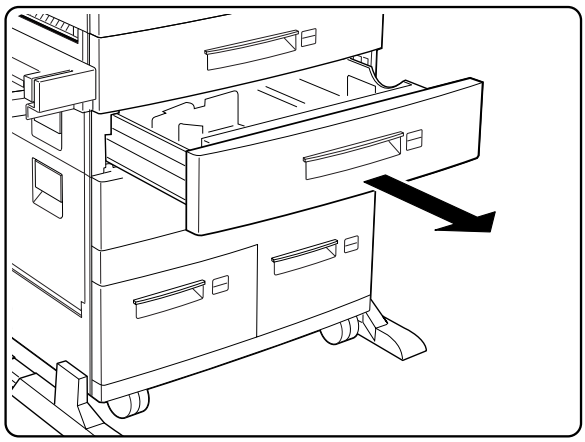
2. Close the front cover and the upper left cover.



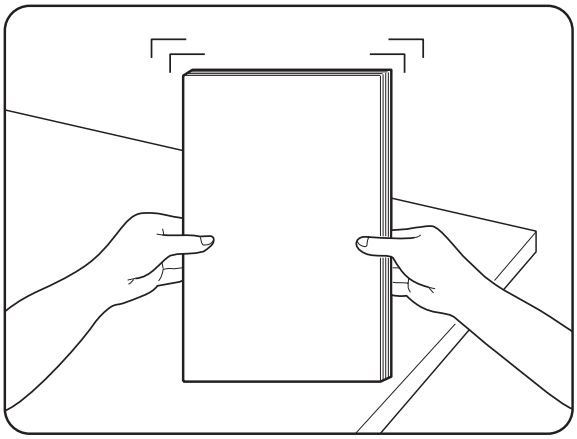
NOTE: When closing the upper left cover, do not use the latch on the cover. Instead, follow the instruction label on the cover and push the recommended location.

Adding paper to the 500-sheet universal paper cassette

1. Pull out the cassette until it stops.

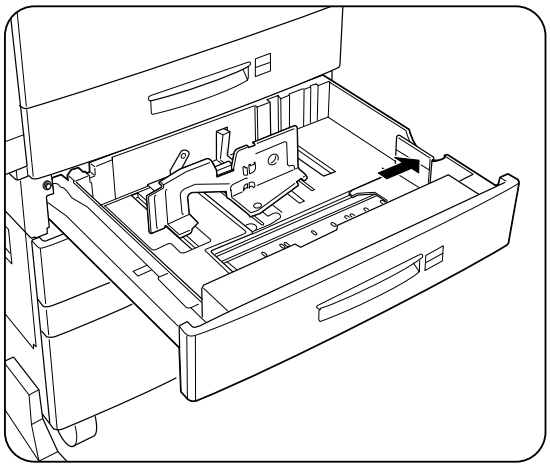


2. Prepare a stack of paper. Make sure the tops of the sheets are properly aligned.

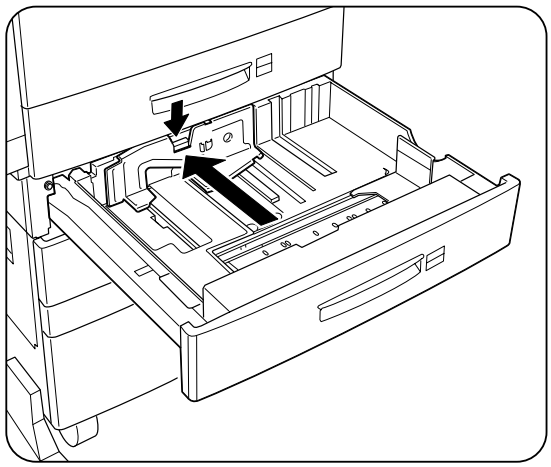


NOTE: Do not use paper with creases or wrinkles. When using special paper, fan it before insertion.

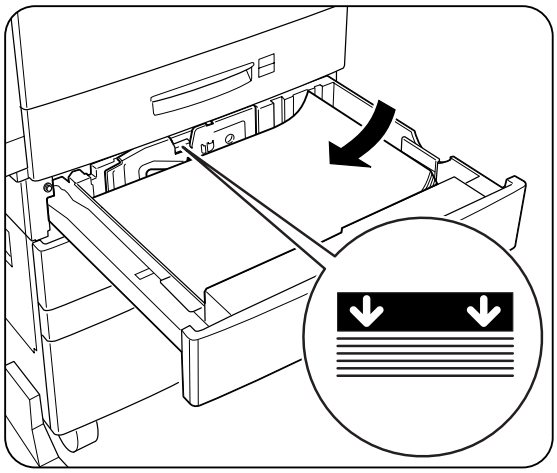
3. Gently lift up the length guide, and slide it all the way until it stops.



4. While pressing down the gray handle, slide the side guide all the way until it stops.

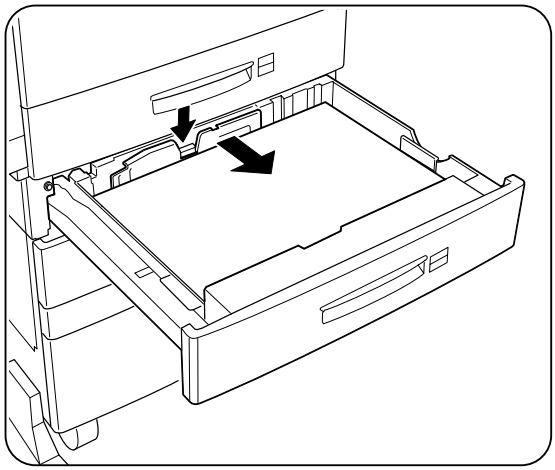


5. Align the four corners of the paper and place the paper in the cassette. The paper should enter easily between the guides. Make sure the paper does not get bent upwards by the guides.



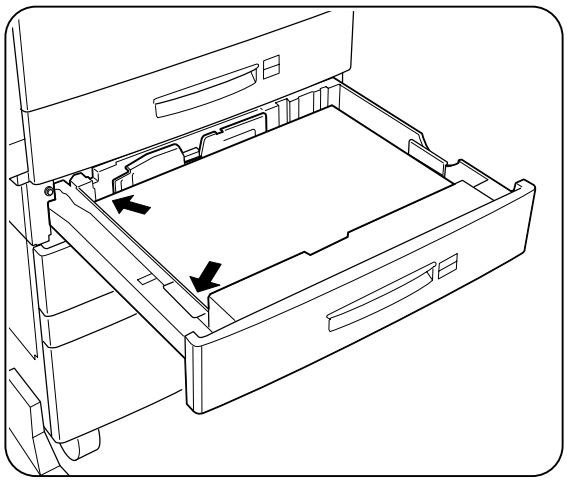
NOTE: Make sure the paper stack height does not exceed the paper limit mark. Do not overload the cassette. Always load paper of the same size.

6. Adjust the side guide to the paper width.

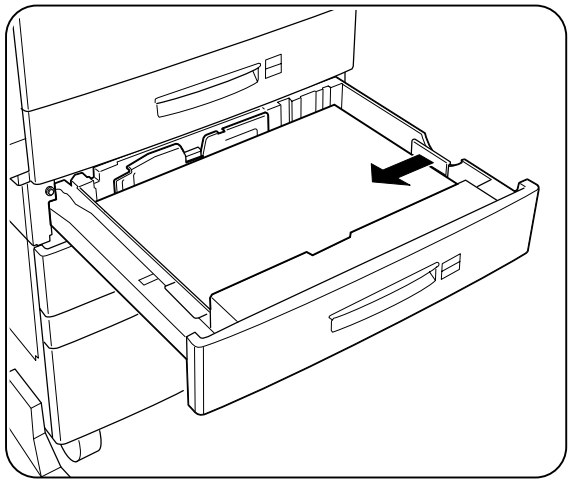


NOTE: Adjust the guide to the paper size correctly; otherwise paper may not be transported correctly and may result in a paper jam.

7. Align the edges of the paper stack

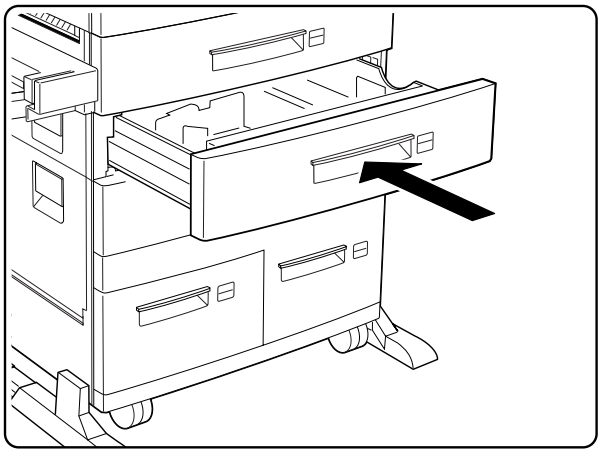


8. Adjust the length guide to the paper length.



NOTE: Make sure the guide stopper is locked firmly in the guide hole on the bottom of the cassette. Adjust the guide to the paper size correctly otherwise paper may not be transported correctly and may result in a paper jam.

9. Insert a correct paper size label into the paper size slot on the cassette, then push the cassette all the way back into the printer until it latches.



Connecting the Parallel Cable

1. Attach an optional parallel cable to the parallel port on the rear of your printer.
2. Attach the other end of the parallel cable to the parallel port on your PC or workstation.

Connecting the Ethernet Cable

1. Attach appropriate cable to your Ethernet hub.
2. Attach the opposite end of the cable to the ethernet port on the printer.

Connecting the Power Cord

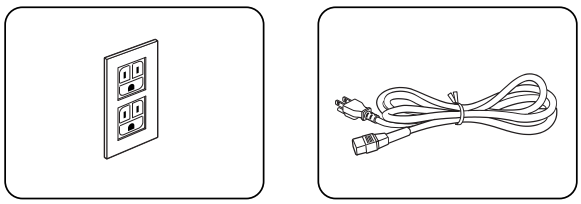
Connect the printer to an AC outlet as described below.

WARNING: To prevent the risk of electric shock, never touch the power cord or plug with wet hands.

CAUTION: When disconnecting the power cord, always grasp the plug and do not pull at the cable. Damage to the cord can lead to fire and electric shock.

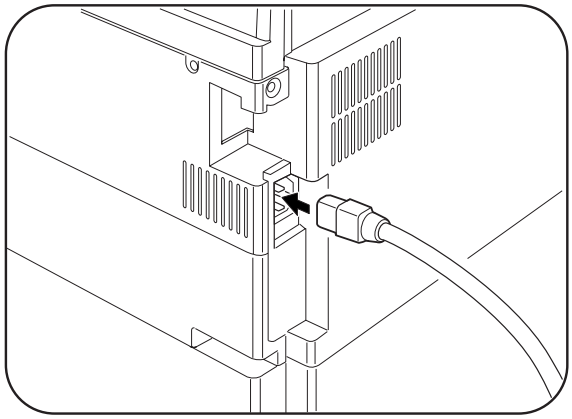
- Do not plug the printer into an AC outlet with incorrect voltage.
- Do not use any multi-extension cord connector otherwise there is a risk of fire and electric shock.
- Do not use extension cords with rated current less than 124V 15A. Never use extension cords with low capacity, or extreme heat or flame may result. Consult your dealer on the correct type of extension cord to use.
- Do not damage or modify the extension cord. Also, do not bend, pull, or place heavy objects on the extension cord otherwise the extension cord may be damaged and result in fire hazard or electric shock.
- See "Safety Notes" on page B-2.

AC OUTLET **POWER CORD**

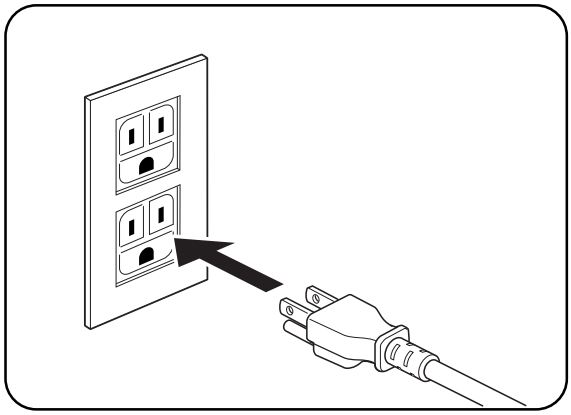


1. Insert the power cord into the AC connector on the printer

2. Verify that the power switch of the printer is set to the [**O**] (off) position then insert the plug of the power cord into the AC outlet.

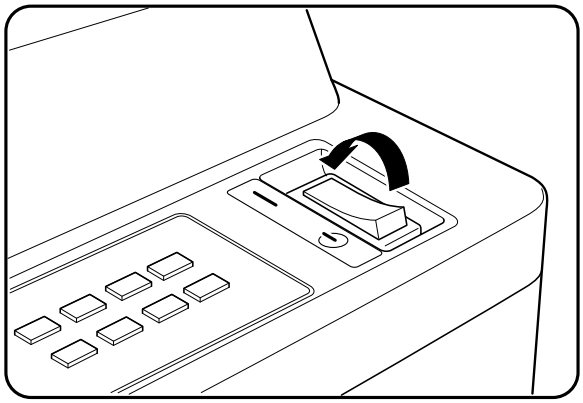


3. Connect the power cord to the outlet.



Turning the Printer On

Set the power switch to the [I] position to turn on the printer.



The top line of the LCD display reads:

```
Loading
```

followed by asterisks progressing across the bottom line:

```
**************
```

Following a LED self test, asterisks progress across both lines of the display

```
**************
**************
```

and the Power On Self Test ends with the top line of the display reading:

```
Ready
```

NOTE: While turned on, the printer will go into the standby state if it remains idle for a period of time.If an error message appears, see "Control Panel LCD Messages" on page 6-17.

Selecting a Display Language

The default language for all LCD display messages and the Configuration Summary and Test Page is English. You can change the default language to Espanol, Italiano, Deutsch or Francais.

NOTE: The language that you select will be reflected on all LCD display messages, and also the content of the Configuration Summary and Test Page.

To change the default language from English to one of the other four available selections:

1. From the Ready status, press MENU, the control panel display will read:

   ```
   Menu
   Paper
   ```

2. Press PREVIOUS or NEXT until the display reads:

   ```
   Menu
   System Menu
   ```

3. Press SELECT, the display will read:

   ```
   System Menu
   Factory Defaults
   ```

4. Press NEXT or PREVIOUS until the display reads:

   ```
   System Menu
   Display Language
   ```

5. Press SELECT, the display will read:

   ```
   System Menu
   English
   ```

6. Press NEXT or PREVIOUS until the desired default language appears on the bottom line of the display:
7. Press SELECT. You have now changed the default language.

Installing Printer Drivers

Installing Printer Drivers and other Software for UNIX and Windows

To install printer drivers and other software for UNIX and Windows, go to the SOFTWARE folder located on the Electronic Library CD-ROM. The SOFTWARE folder contains the following subfolders:

- Drivers Folder

  The Drivers folder contains all of the printer drivers necessary to print from Windows 3.1and 95/98, and Windows NT 3.5.1 and 4.0, and Windows 2000 systems. Refer to the DRIVERS.TXT file included in this folder for more information about installing and using driver software.

- EZWebCon Folder

  The EZWebCon folder contains the EZWebCon software used to configure and manage your Network Interface Card. Refer to the README.TXT file included in this folder for more information about installing and using EZWebCon.

- NetPort Folder

  The NetPort folder contains the network port software that allows you to print directly from Windows 95/98 and Intel Windows NT 4.0 systems. Refer to the README.TXT file included in this folder for more information about installing and using this software.

- PFDload Folder

  The PFDload folder contains information about downloading printer firmware updates. Refer to the README.TXT file included in this folder for more information.

- UnixSW Folder

The UnixSW folder contains Compuprint UNIX Printing Software, which is an enhanced print filter and network socket driver that allows you to take advantage of all of the printing features of your printer. Refer to the INSTSALL.PDF file included in this folder for more information about installing and using Gentian UNIX Printing Software.

Installing Printer Drivers for MacOS

To install printer drivers for MacOS, refer to the following folder on the Electronic Library CD-ROM:

- Compuprint Printer Driver folder

1. The Printer Driver folder contains the AdobePS driver installation kit and PPD file for the printer. These items are available in English, German, French, Italian, and Spanish.

Printing a Configuration Summary

Your printer can print a configuration summary that lists the currently selected status of menu options, media selections in trays, options installed and other relevant information about your printer. To print a Configuration Summary, follow these steps:

1. From the Ready status, press MENU, the control panel display will read:

   ```
   Menu
   Paper
   ```

2. Press PREVIOUS or NEXT until the display reads:

   ```
   Menu
   Functions
   ```

3. Press SELECT, the display will read:

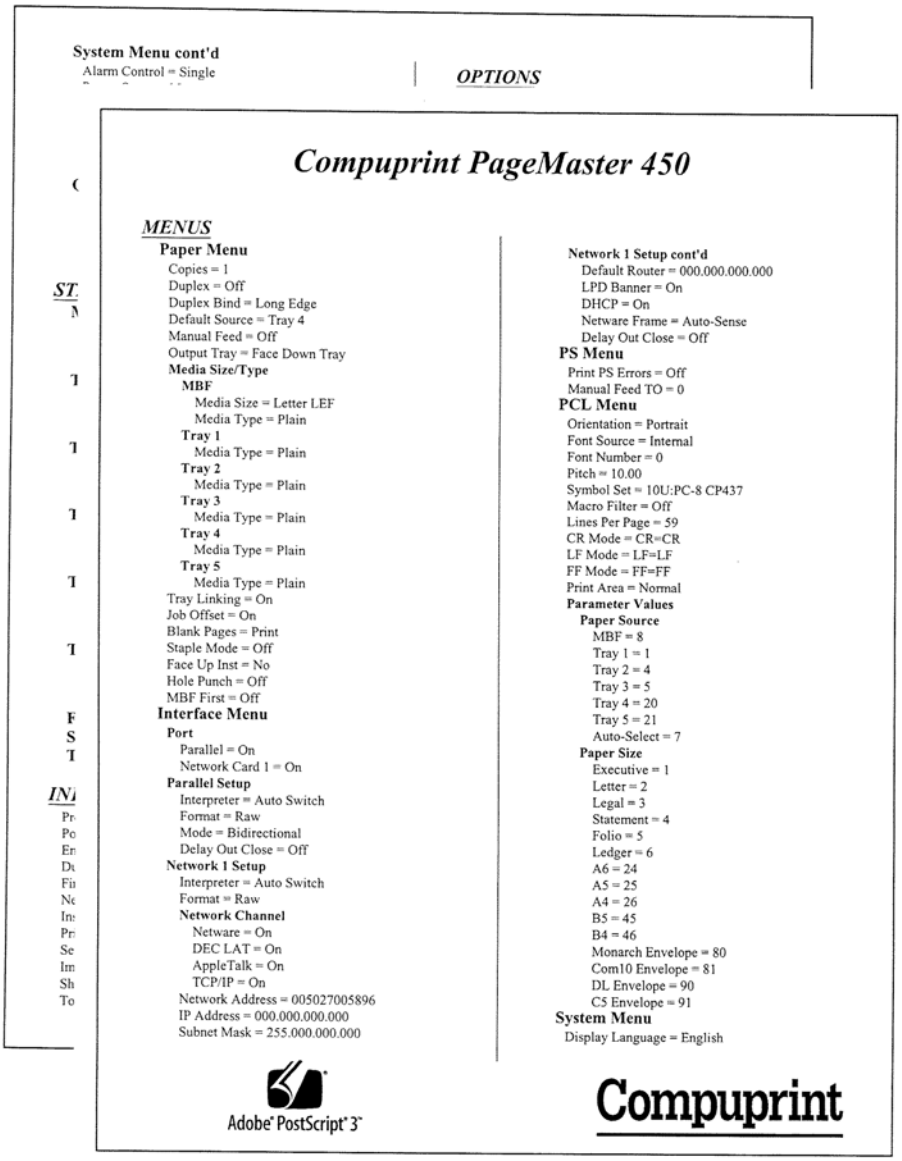
   ```
   Functions
   Reset Printer
   ```

4. Press NEXT or PREVIOUS until the display reads:

   ```
   Functions
   Print Summary
   ```

5. Press SELECT. A two page Configuration Summary will print. An example of a Configuration Summary appears on the following page.

NOTE: Depending upon the options installed and menu settings, your Configuration Summary may vary.



System Menu cont'd
Alarm Control = Single

OPTIONS

Compuprint PageMaster 450

MENUS

Paper Menu
- Copies = 1
- Duplex = Off
- Duplex Bind = Long Edge
- Default Source = Tray 4
- Manual Feed = Off
- Output Tray = Face Down Tray
- **Media Size/Type**
  - **MBF**
    - Media Size = Letter LEF
    - Media Type = Plain
  - **Tray 1**
    - Media Type = Plain
  - **Tray 2**
    - Media Type = Plain
  - **Tray 3**
    - Media Type = Plain
  - **Tray 4**
    - Media Type = Plain
  - **Tray 5**
    - Media Type = Plain
- Tray Linking = On
- Job Offset = On
- Blank Pages = Print
- Staple Mode = Off
- Face Up Inst = No
- Hole Punch = Off
- MBF First = Off

Interface Menu
- **Port**
  - Parallel = On
  - Network Card 1 = On
- **Parallel Setup**
  - Interpreter = Auto Switch
  - Format = Raw
  - Mode = Bidirectional
  - Delay Out Close = Off
- **Network 1 Setup**
  - Interpreter = Auto Switch
  - Format = Raw
  - **Network Channel**
    - Netware = On
    - DEC LAT = On
    - AppleTalk = On
    - TCP/IP = On
  - Network Address = 005027005896
  - IP Address = 000.000.000.000
  - Subnet Mask = 255.000.000.000

Network 1 Setup cont'd
- Default Router = 000.000.000.000
- LPD Banner = On
- DHCP = On
- Netware Frame = Auto-Sense
- Delay Out Close = Off

PS Menu
- Print PS Errors = Off
- Manual Feed TO = 0

PCL Menu
- Orientation = Portrait
- Font Source = Internal
- Font Number = 0
- Pitch = 10.00
- Symbol Set = 10U:PC-8 CP437
- Macro Filter = Off
- Lines Per Page = 59
- CR Mode = CR=CR
- LF Mode = LF=LF
- FF Mode = FF=FF
- Print Area = Normal
- **Parameter Values**
  - **Paper Source**
    - MBF = 8
    - Tray 1 = 1
    - Tray 2 = 4
    - Tray 3 = 5
    - Tray 4 = 20
    - Tray 5 = 21
    - Auto-Select = 7
  - **Paper Size**
    - Executive = 1
    - Letter = 2
    - Legal = 3
    - Statement = 4
    - Folio = 5
    - Ledger = 6
    - A6 = 24
    - A5 = 25
    - A4 = 26
    - B5 = 45
    - B4 = 46
    - Monarch Envelope = 80
    - Com10 Envelope = 81
    - DL Envelope = 90
    - C5 Envelope = 91

System Menu
- Display Language = English

Adobe PostScript 3

Compuprint

Printing a Test Page

Your printer can print a test page that lists the indicates, grey scale, resolution settings, page counter, and other relevant information about your printer. To print a Test Page, follow these steps:

1. From the Ready status, press MENU, the control panel display will read:

   ```
   Menu
   Paper Menu
   ```

2. Press PREVIOUS or NEXT until the display reads:

   ```
   Menu
   Functions
   ```

3. Press SELECT, the display will read:

   ```
   Functions
   Reset Printer
   ```

4. Press NEXT or PREVIOUS until the display reads:

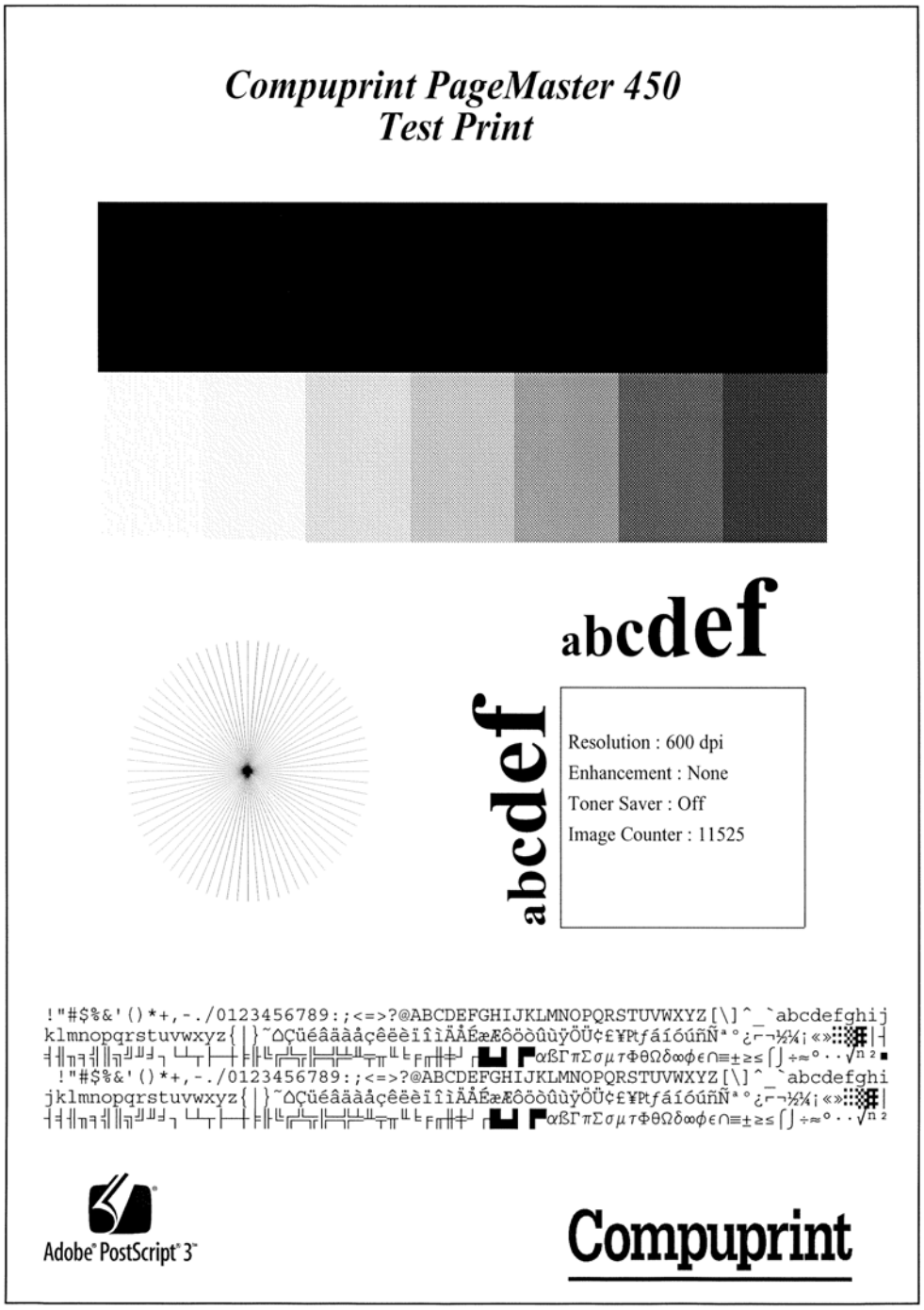
   ```
   Functions
   Print Test
   ```

5. Press SELECT, the display will read:

   ```
   Print Test
   Single
   ```

6. Press SELECT. A single page Test Page will print. An example of a Test Page appears on the following page.

NOTE: The size of the Test Page will match the size of the default paper size selected.


Compuprint PageMaster 450
Test Print
abcdef
abcdef
Resolution : 600 dpi
Enhancement : None
Toner Saver : Off
Image Counter : 11525
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghij
klmnopqrstuvwxyz{|}~ÂÇüéâäàåçêëèïîìÄÅÉæÆôöòûùÿÖÜ¢£¥₧ƒáíóúñÑª°¿⌐¬½¼¡«»
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi
jklmnopqrstuvwxyz{|}~ÂÇüéâäàåçêëèïîìÄÅÉæÆôöòûùÿÖÜ¢£¥₧ƒáíóúñÑª°¿⌐¬½¼¡«»
Adobe PostScript 3
Compuprint

Printing PCL and PostScript Font Lists

Your printer has the capability of printing lists of all installed PCL or PostScript fonts. To print a Font List, follow these steps:

1. From the Ready status, press MENU, the control panel display will read:

   ```
   Menu
   Paper Menu
   ```

2. Press PREVIOUS or NEXT until the display reads:

   ```
   Menu
   Functions
   ```

3. Press SELECT, the display will read:

   ```
   Functions
   Reset Printer
   ```

4. Press NEXT or PREVIOUS until the display reads:

   ```
   Functions
   Print Fonts
   ```

5. Press SELECT, the display will read:

   ```
   Print Fonts
   PCL Fonts
   ```

NOTE: You may toggle between PCL Fonts and Postscript Fonts using the PREVIOUS or NEXT push-buttons.

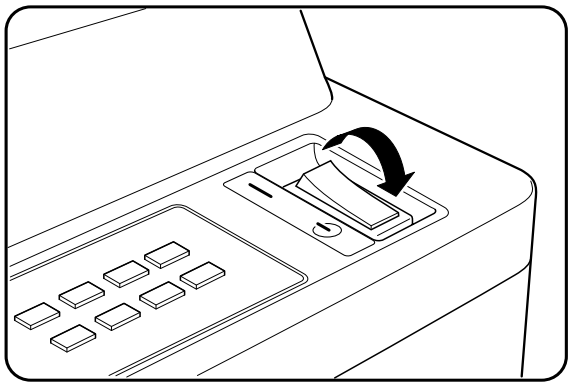
6. Press SELECT. A multi page resident Font List will print. Examples of a PCL and PostScript Font Lists appears in Appendix C of this manual.

Turning the Printer Off

Remember to turn off the printer at the end of day or when the printer will not be used for an extended period of time.

NOTE: When the printer is turned off, all print data still in memory will be erased.

Set the power switch to the [0] position to turn off the printer.



◆ ◆ ◆

Chapter 2

Printer and Options Parts and Functions

In this Chapter . . .

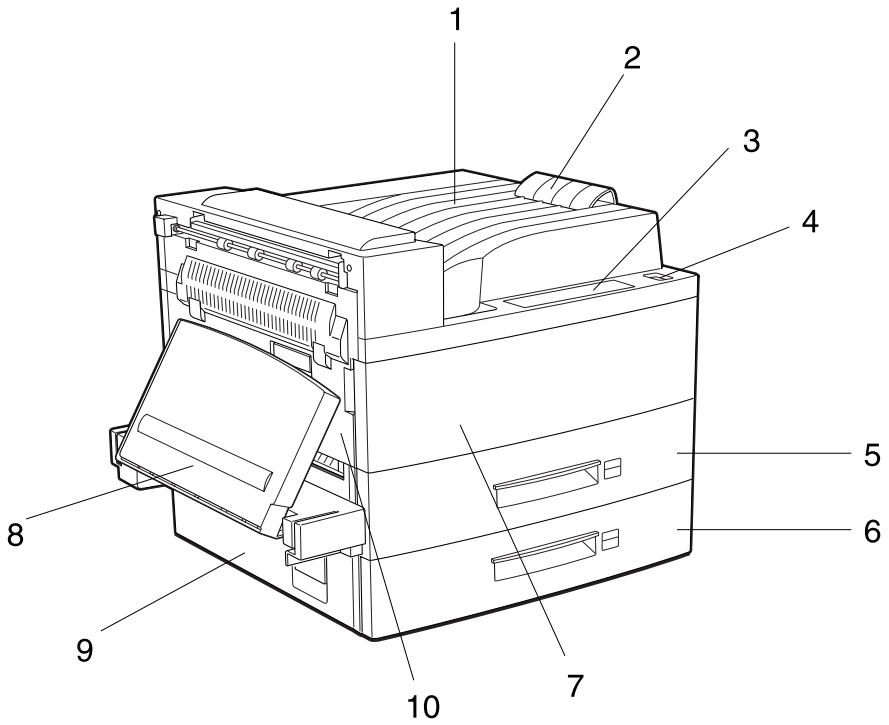
- "About this Chapter" on page 2-2
- "Main Unit" on page 2-2
- "Options" on page 2-6

About this Chapter

Describes the parts of the printer and paper handling options and their functions. A discussion of the paper path is also included. Also describes all available options and consumables for your printer and their respective part numbers.

Main Unit

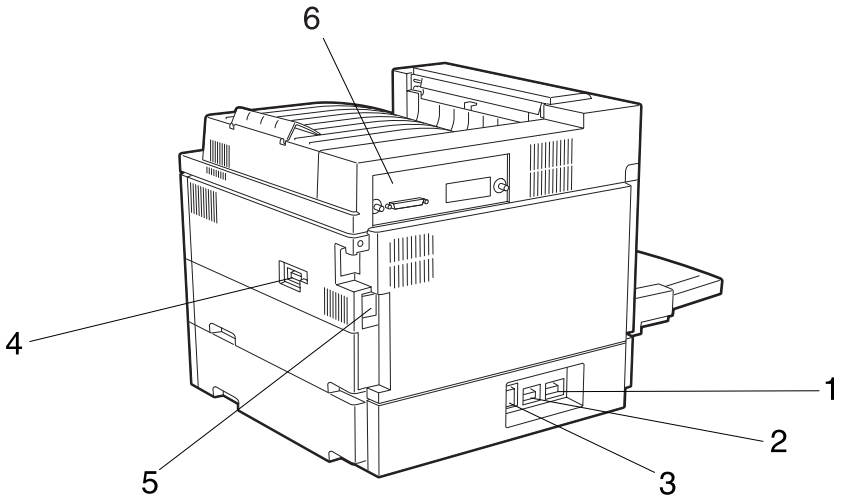
Front view



1	Paper output tray	Collects printed sheets, face down.
2	Paper stopper	Stops printed sheets so that they are collected properly.
3	Operation panel	Contains all push-buttons, LEDs and LCD display controls required for operation of the printer.
4	Power switch	Serves to turn the printer on and off.
5	Tray 1	Paper cassette which holds about 500 sheets of paper.
6	Tray 2	Paper cassette which holds about 500 sheets of paper.
7	Front cover	Provides access to the EP cartridge inside the printer.
8	Multi bypass feeder (MBF)	Accepts both standard and non-standard paper sizes for printing.
9	Lower left cover	Access area for clearing paper jam.
10	Upper left cover	Open this cover to clear paper jam or when replacing the EP cartridge.

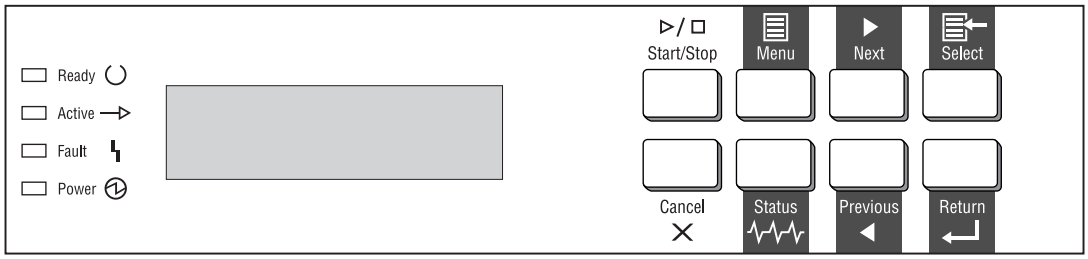
NOTE: The upper left cover can be closed only when the EP cartridge is installed in the printer. Do not close it when the EP cartridge is not inside the printer.

Rear View



1	DUPLEXER connector	Connects to the optional duplexer.
2	OUTPUT connector	Connects to the optional Finisher/Stapler unit.
3	TRAY connector	Connects to the optional HCF (High Capacity Feeder) unit.
4	Power cord receptacle	Connects to an AC outlet.
5	AC outlet	Supplies power to the optional Finisher/Stapler unit.
6	Controller	Houses the parallel and RJ45 ports and optional network interfaces.

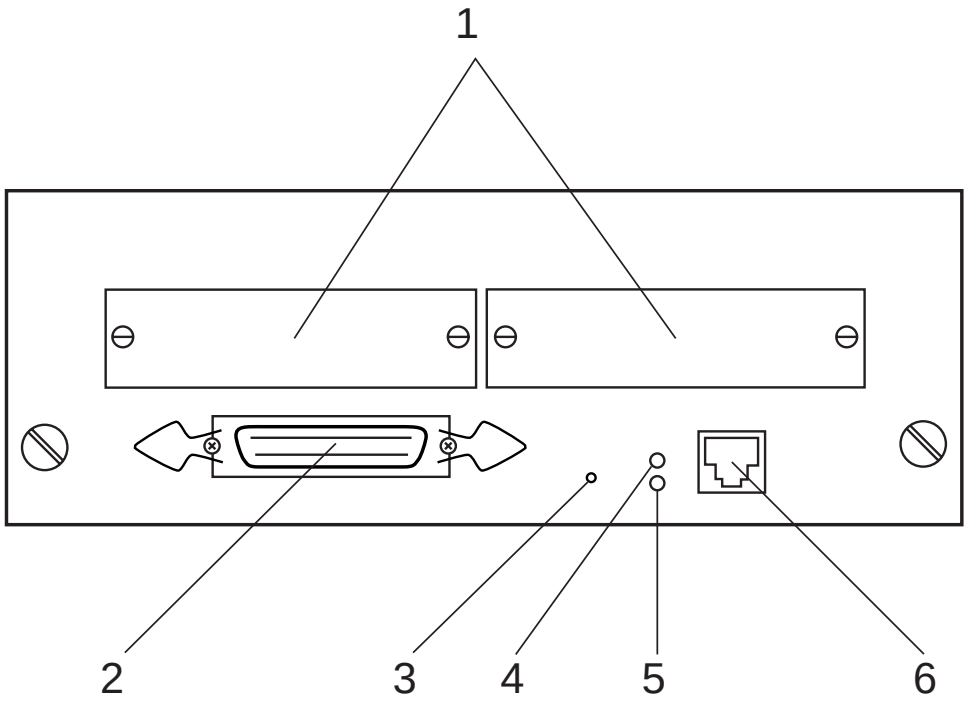
Operation Panel



Display

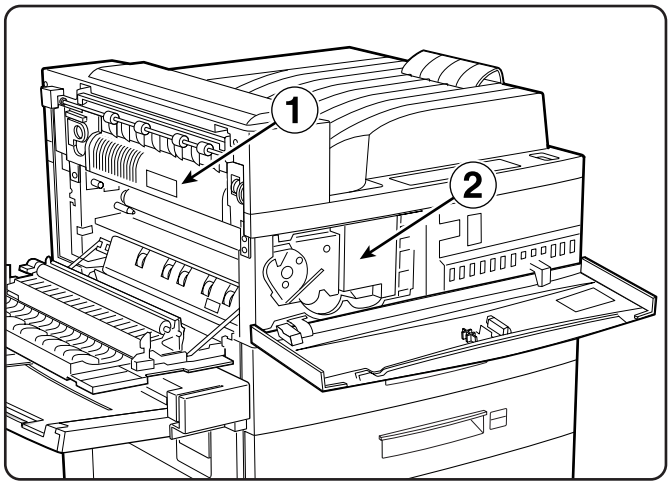
Shows error messages and other status information. Refer to ”Chapter 4 Understanding and Navigating the Control Panel Menus” for a detailed discussion about using the LCD display and push-buttons of the control panel.

Controller



1	Optional Network Interfaces
2	Parallel Port
3	Ethernet Reset Switch
4	LED ON - 100BaseT Connection active OFF - 10BaseT Connection active
5	LED ON - Indicates Ethernet connection is active.
6	RJ45 Ethernet Port

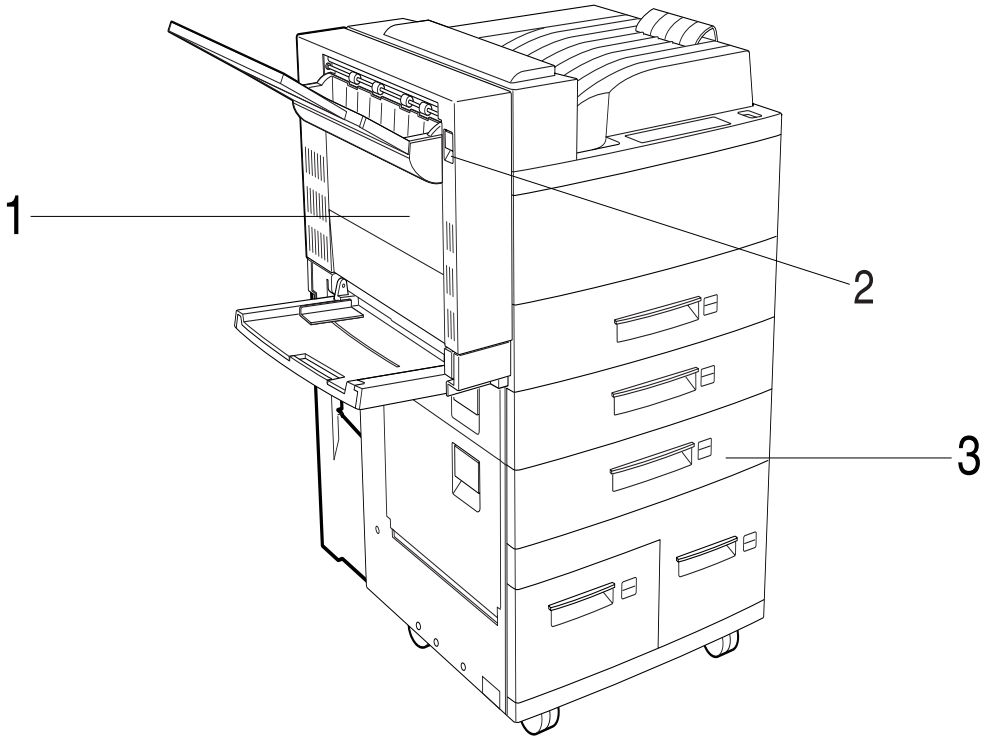
Inside the Printer



1	Fuser	Fixes toner onto the paper
2	EP Cartridge	The integrated cartridge contains the toner and the photosensitive drum.

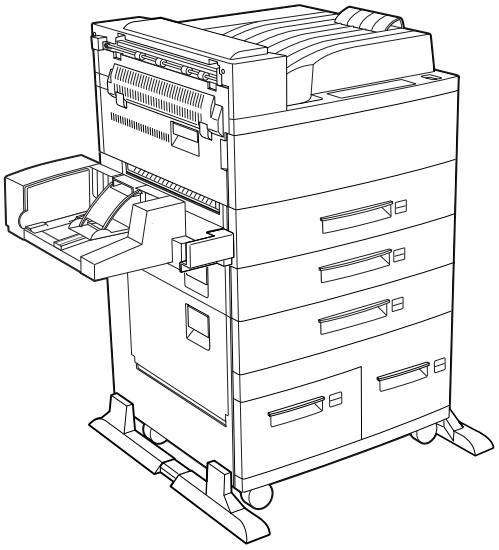
WARNING: The fuser becomes very hot in operation. If you have to access the fuser area, turn the power off and wait at least 40 minutes before removing the drum cartridge and touching the fuser section. Never touch the fuser area where a label indicating high temperature is located (such as that shown below), or else burns may result

Options



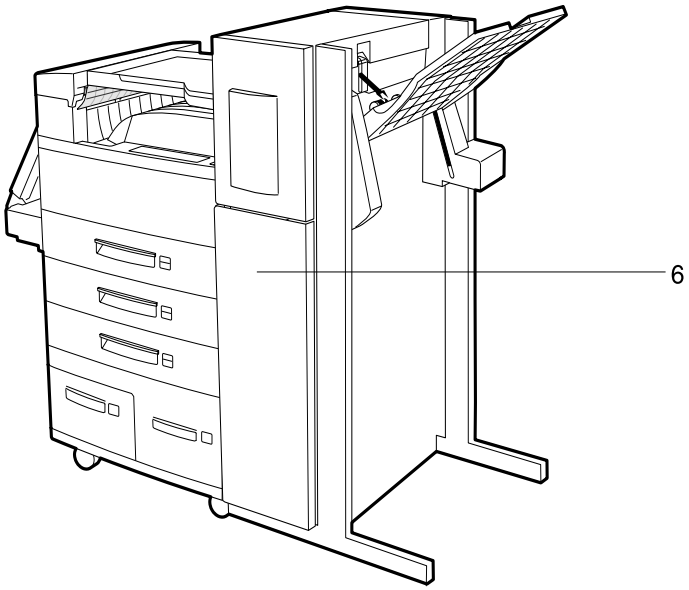
The above illustration show the printer with the standard cassette feeders, duplexer, and face-up tray installed.

1	Duplexer	For printing on both sides of a sheet.
2	Duplexer latch	Lift to replace the EP cartridge or remove jammed paper
3	High Capacity Feeder (HCF) unit (Trays 3, 4, 5)	Contains 3 cassettes for high volume paper input.



The above illustration shows the printer with the envelope feeder installed.

5	Envelope feeder	The optional envelope feeder can be hold up to about 100 envelopes.



The above illustration shows the printer with the Finisher/Stapler unit installed.

6	Finisher/Stapler unit	High capacity finisher (stacker) and stapler for automatic stapling of printed sheets.

NOTE: Additional options such as network interfaces, memory DIMMs, consumables and user publications are available for your printer.

Chapter 3

Understanding Paper, Paper Paths, Paper Delivery and Paper Loading

In this Chapter . . .

- "About this Chapter" on page 3-2
- "Paper" on page 3-2
- "Paper Size Requirements" on page 3-2
- "Media Sizes Supported" on page 3-4
- "Media Types supported" on page 3-5
- "Paper Orientation" on page 3-6
- "Long and Short Edge Duplex Binding in Portrait and Landscape Orientations" on page 3-9
- "Paper Paths" on page 3-11
- "Paper Delivery" on page 3-13
- "Adding paper to the 500-sheet paper cassette, Tray 1 or Tray 2" on page 3-16
- "Adding paper to the multi bypass feeder" on page 3-20
- "Adding paper to the HCF unit (2500-sheet)" on page 3-22
- "Loading envelopes into the envelope feeder" on page 3-29

About this Chapter

Provides information on paper qualities, paper size requirements, paper paths, paper output delivery and loading of paper in your printer and options.

Paper

To obtain good print quality, only use the recommended paper. In choosing paper other than the recommended ones, use the following tables as guidance. Using paper other than that recommended may cause paper jam and other printer problems. Contact your point of purchase for more information.

Unacceptable paper

Avoid using the following media as they cause paper jams and print quality problem.

- Excessively thick or thin paper
- Paper that has already been printed
- Wrinkled, torn or bent paper
- Moist or wet paper
- Curled paper
- Paper with an electrostatic charge
- Glued paper
- Paper with special coating
- Color paper with surface treatment
- Paper unable to withstand temperature of 302∫ F (150∫ C)
- Thermal paper
- Carbon paper
- Paper with paper fastener, ribbons, tape etc. attached
- Heavily textured paper
- Label stock with exposed backing sheets

Storing paper

In addition to using paper meeting the specifications, be sure to store the paper properly to avoid print quality problems and paper jams.

- Store paper in a dry location away from direct sunlight.
- Store any unused paper in its original packing and store in it in a dry location.
- Store paper horizontally on a flat surface.

Store paper so as to avoid wrinkle, bending, curl, etc.

Paper Size Requirements

The paper sizes you can use are listed in the following tables.

Main unit

Paper Source	Paper Size			Simplex Printing	Duplex Printing
		X (mm)	Y(mm)		
Tray 1 Tray 2	A4 LEF	210	297	Yes	Yes
	B4 SEF	364	257	Yes	Yes
	8.5" x 11" LEF	216	280	Yes	Yes
	8.5" x 13" SEF	330	216	Yes	Yes
	7.5" x 10.5" LEF	184	267	Yes	Yes
	B5 LEF	182	257	Yes	Yes
	A3 SEF	420	297	Yes	Yes
	8.5" x 14" SEF	356	216	Yes	Yes
	11" x 17" SEF	432	279	Yes	Yes
Tray 1 Only	A5 LEF	148	210	Yes	Yes
	5.5" x 8.5" LEF	140	216	Yes	Yes

High Capacity Feeder Option (Trays 3, 4, and 5)

Paper Source	Paper Size			Simplex Printing	Duplex Printing
		X (mm)	Y(mm)		
Tray 3	A4 LEF	210	297	Yes	Yes
	B4 SEF	364	257	Yes	Yes
	8.5" x 11" LEF	216	280	Yes	Yes
	8.5" x 13" SEF	330	216	Yes	Yes
	7.5" x 10.5" LEF	184	267	Yes	Yes
	B5 LEF	182	257	Yes	Yes
	A3 SEF	420	297	Yes	Yes
	11" x 17" SEF	432	279	Yes	Yes
	8.5" x 14" SEF	356	216	Yes	Yes

Paper Source	Paper Size			Simplex Printing	Duplex Printing
Tray 4 Tray 5	A4 LEF	210	297	Yes	Yes
	8.5" x 11" LEF	216	280	Yes	Yes
	7.5" x 10.5" LEF	330	216	Yes	Yes
	B5 LEF	182	257	Yes	Yes

NOTE: 1. Different size papers cannot be mixed and loaded into the same paper source.
2. Duplex printing is possible only when the optional duplexer is installed.

Media Sizes Supported

NOTE: In the following table, SEF refers to Short Edge Feed whereas LEF refers to Long Edge Feed.
See "Paper Orientation" on page 3-6

.

MEDIA SIZE	Tray 1	Tray 2	Tray 3	Tray 4	Tray 5	MBF	Env Fdr
LEDGER (11" x 17")	*	*	*			*	
LETTER LEF (8.5" x 11")	*	*	*	*	*	*	
LEGAL (8.5" X 14")	*	*	*			*	
FOLIO (8.5" X 13")	*	*	*			*	
EXECUTIVE (7.25" X 10.5")	*	*	*	*	*	*	
STATEMENT (5.5" X 8.5")	*					*	
A3	*	*	*			*	
A4 LEF	*	*	*	*	*	*	
A4 SEF						*	
A5	*					*	
A6						*	
B4	*	*	*			*	
B5	*	*	*	*	*	*	
MONARCH ENVELOPE						*	*
DL ENVELOPE						*	*
C5 ENVELOPE						*	*

MEDIA SIZE	Tray 1	Tray 2	Tray 3	Tray 4	Tray 5	MBF	Env Fdr
COM 10 ENVELOPE						*	*
LETTER SEF						*	

Media Types supported

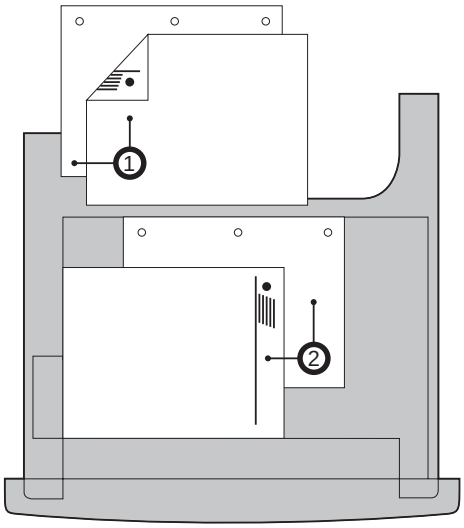
NOTE: In the following tables, SEF refers to Short Edge Feed whereas LEF refers to Long Edge Feed.

.

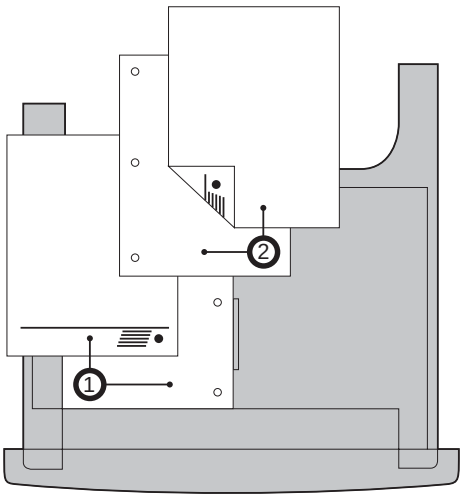
MEDIA TYPE	Tray 1	Tray 2	Tray 3	Tray 4	Tray 5	MBF	Env Fdr
PLAIN	*	*	*	*	*	*	*
LABEL						*	
TRANSPARENCY (LETTER)	*	*				*	
TRANSPARENCY (A4)	*	*				*	
PREPUNCHED	*	*	*	*	*	*	*
LETTERHEAD	*	*	*	*	*	*	*
COLORED	*	*	*	*	*	*	*
PREPRINTED	*	*	*	*	*	*	*
BOND	*	*	*	*	*	*	*
CARD STOCK						*	
POSTCARD						*	
ENVELOPE						*	*
OTHER	*	*	*	*	*	*	*

Paper Orientation

Paper Orientation in Trays 1, 2, or 3



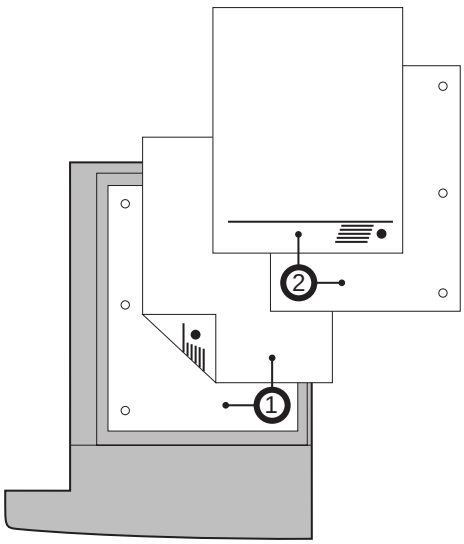
Top View of Short Edge Feeds



Top View of Long Edge Feeds

- 1 represents duplex printing
- 2 represents simplex printing

Paper Orientation in Tray 4

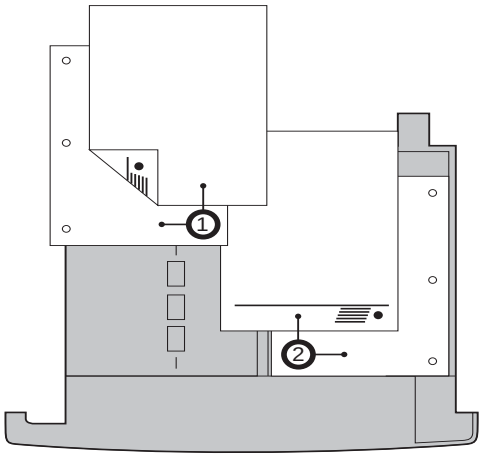


Top View of Long Edge Feeds

- 1 represents duplex printing

- 2 represents simplex printing

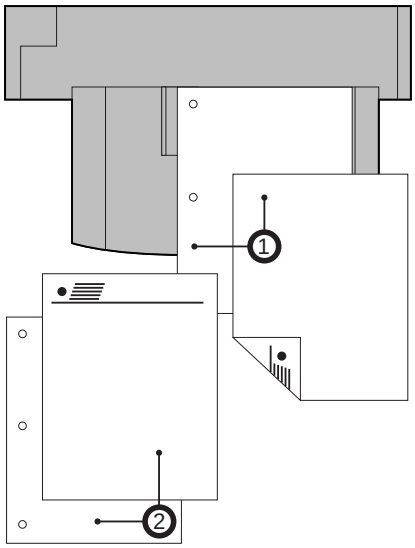
Paper Orientation in Tray 5



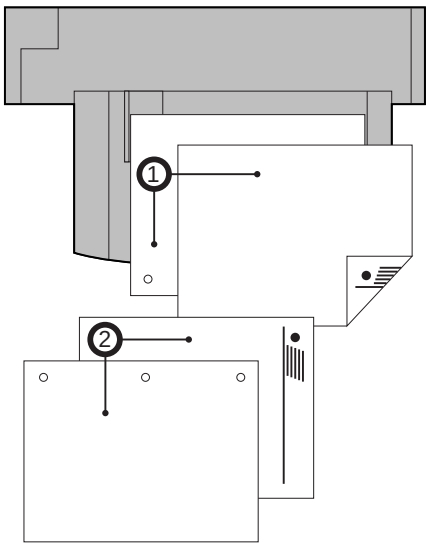
Top View of Long Edge Feeds

- 1 represents duplex printing
- 2 represents simplex printing

Paper and Envelope Orientation in the Bypass Feeder

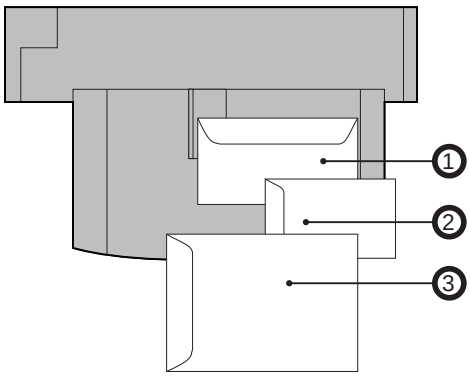


Top View of Short Edge Feeds (SEF)



Top View of Long Edge Feeds (LEF)

- 1 represents duplex printing
- 2 represents simplex printing

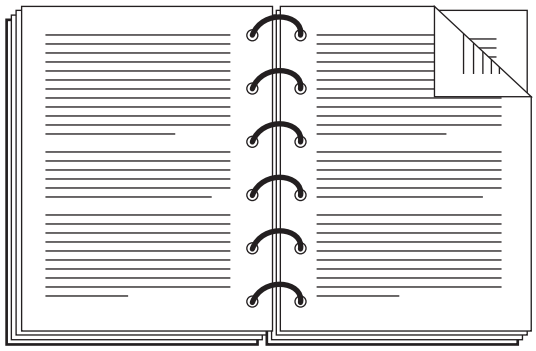


Top View of Envelope Feeds

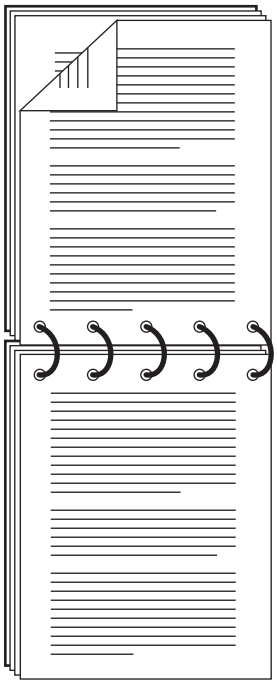
- 1 represents Envelope
- 2 represents DL Envelope
- 3 represents C5 Envelope

Long and Short Edge Duplex Binding in Portrait and Landscape Orientations

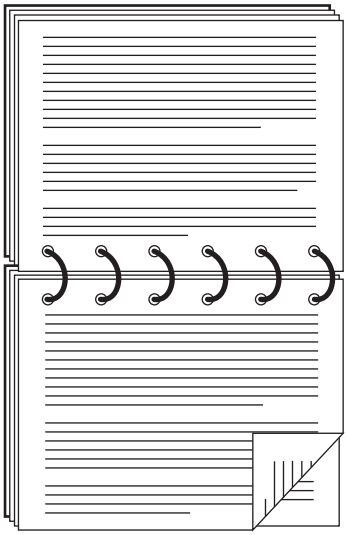
Long Edge Duplex Bind in Portrait Orientation



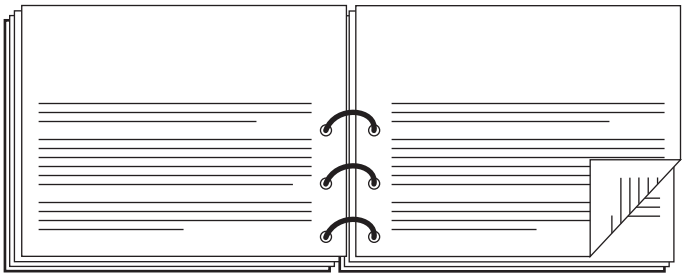
Short Edge Duplex Bind in Portrait Orientation



Long Edge Duplex Bind in Landscape Orientation



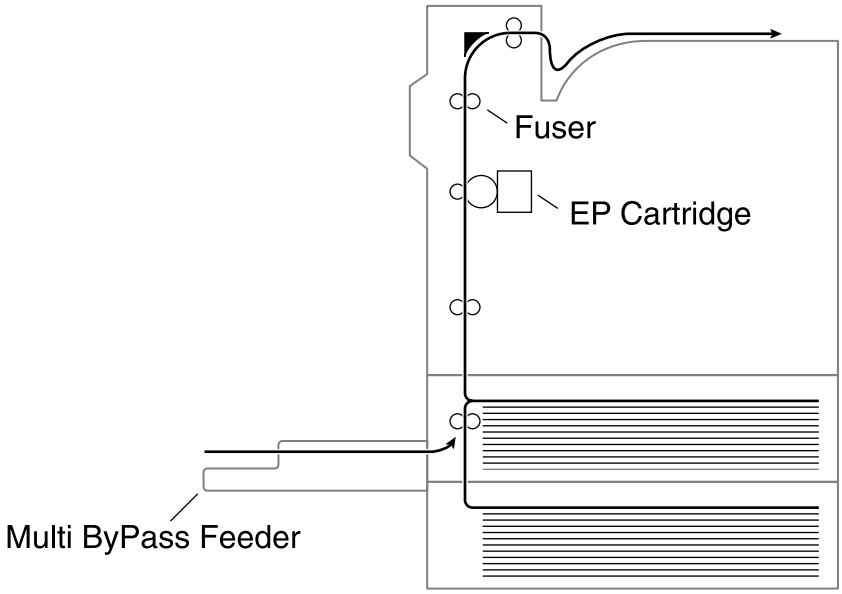
Short Edge Duplex Bind in Landscape Orientation



Paper Paths

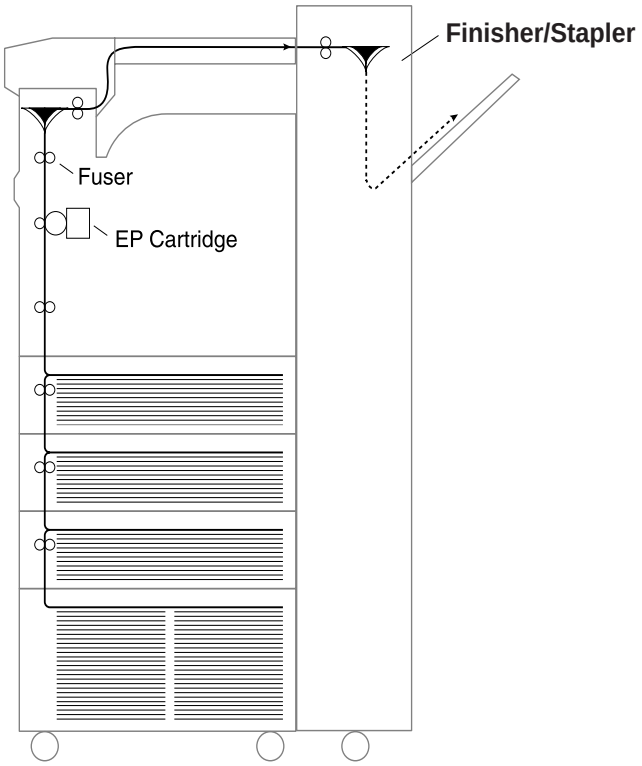
The following illustrations show the paper path through the printer in its standard configuration and also when options are installed.

Paper path for standard configuration

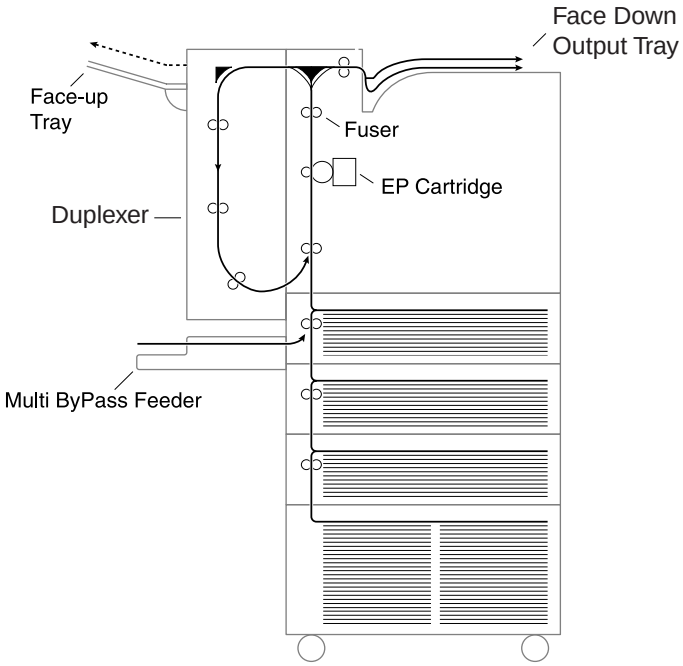


1. The paper is pulled out of a paper cassette or the multi bypass feeder.
2. The image is transferred by the photosensitive drum inside the EP cartridge.
3. The toner on the paper is fixed by the fuser.
4. The paper emerges onto the paper output tray, face down.

Paper path when options are installed



The following illustration shows the printer with the optional HCF unit, duplexer, and face-up tray installed



1. The paper is pulled out of a paper cassette or the multi bypass feeder.
2. The image is transferred by the photosensitive drum.
3. The toner on the paper is fixed by the fuser.
4. The paper is output as follows:
   - For face-up tray: face up.
   - For paper output tray: face down.
   - For Finisher/Stapler unit: face down, stapled.

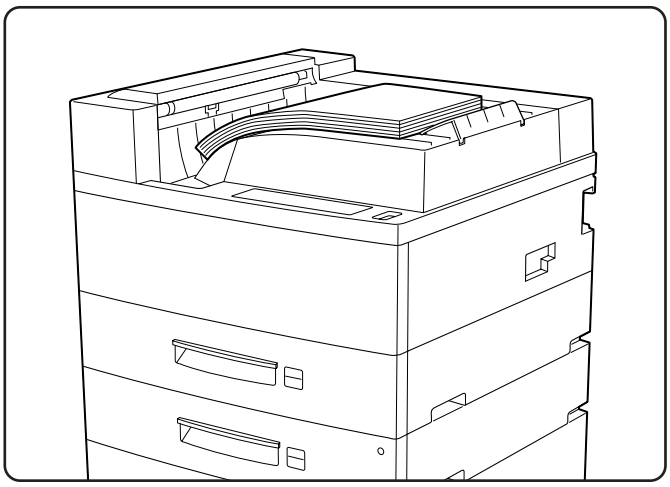
Paper Delivery

The output of paper from the printer is provided in the following ways.

NOTE: Avoid storing too many printouts in the paper output tray. Remove them as soon as possible; otherwise paper jam and paper delivery problems may result.

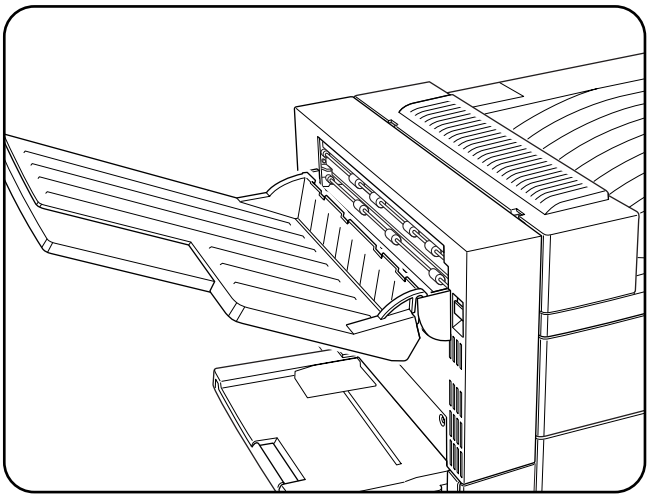
Paper output tray

The standard output tray enables printouts to emerge facing down. It can store up to about 500 sheets of printed paper.



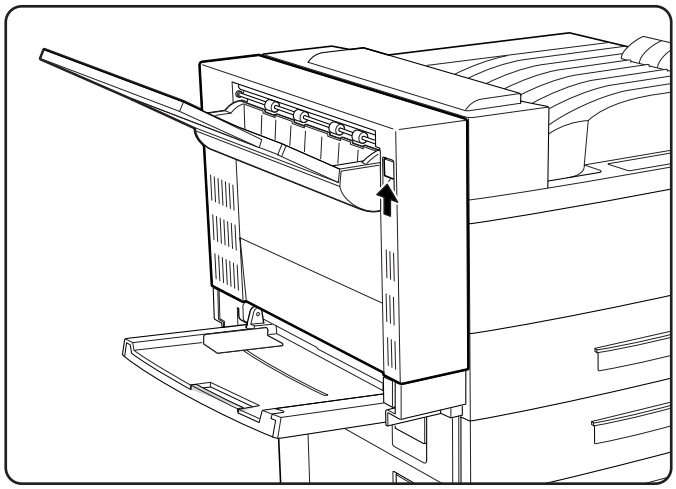
Face-up tray (option)

When installed and selected, the face-up tray can store up to about 200 sheets of paper coming out face down.

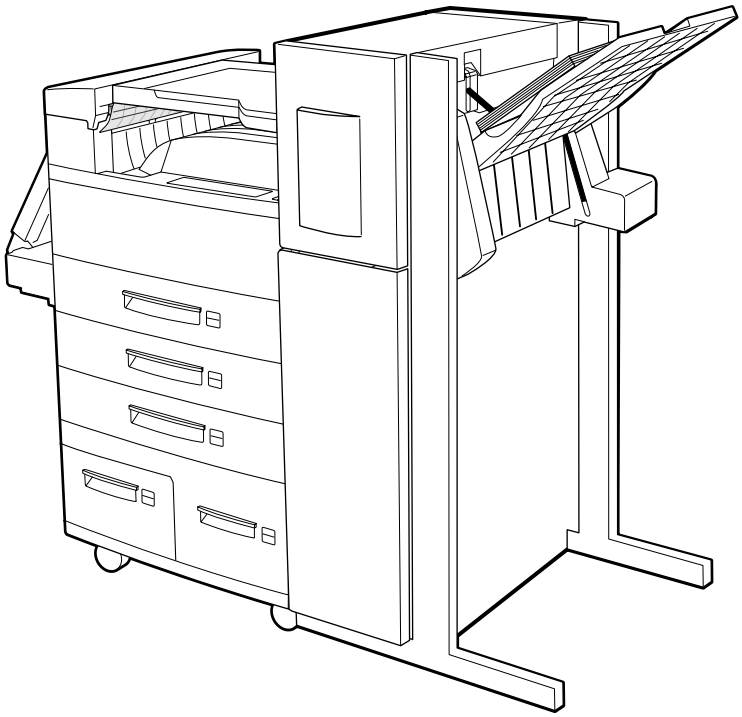


Face-up tray with the Duplexer (option)

When installed and selected, the face-up tray can store up to about 200 sheets of printouts coming out face down.

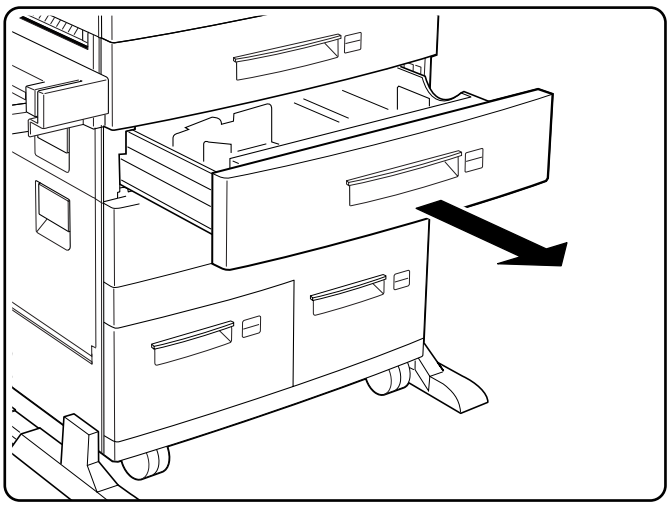


Finisher/Stapler unit (option)

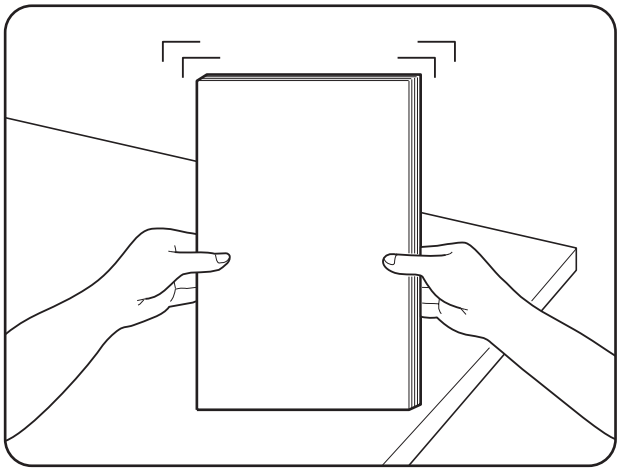


Adding paper to the 500-sheet paper cassette, Tray 1 or Tray 2

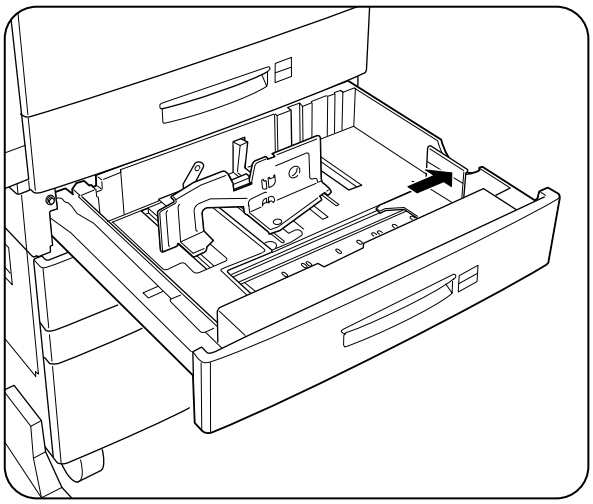
1. Pull out desired tray until it stops.



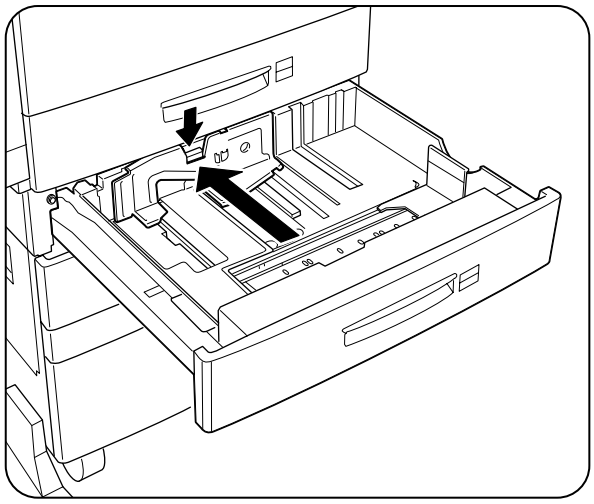
2. Prepare a stack of paper. Make sure the tops of the sheets are properly aligned.



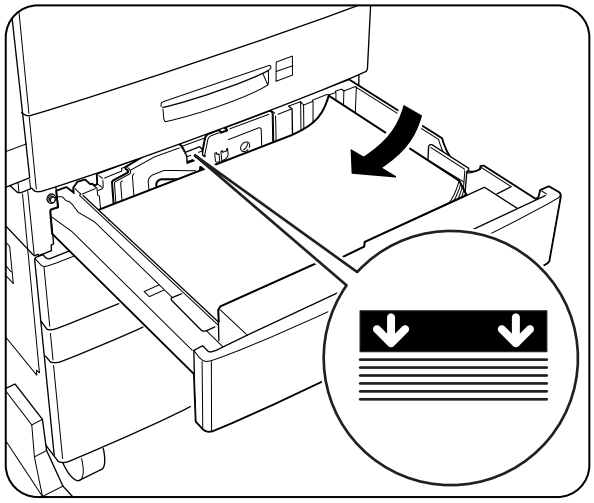
3. Gently lift up the length guide, and slide it all the way until it stops.



4. While pressing down the gray handle, slide the side guide all the way until stops.

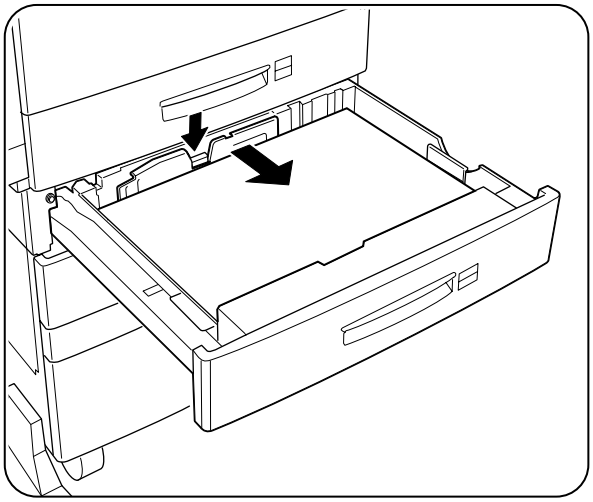


5. Align the four corners of the paper and place the paper in the cassette. The paper should enter easily between the guides. Make sure the paper does not get bent upwards by the guides.



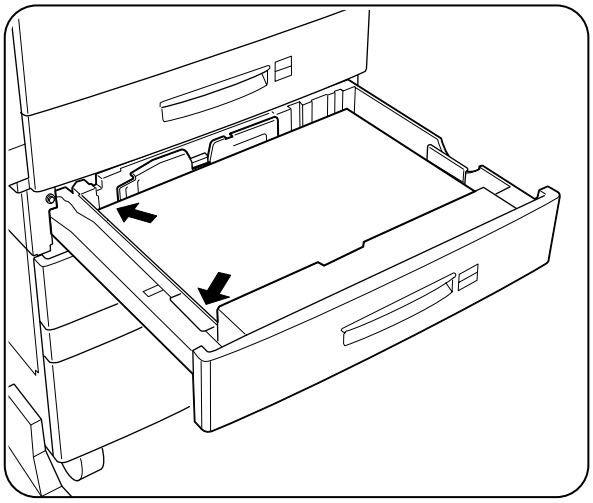
NOTE: Make sure the paper's stack height does not exceed the paper limit mark.

6. Adjust the side guide to the paper width.

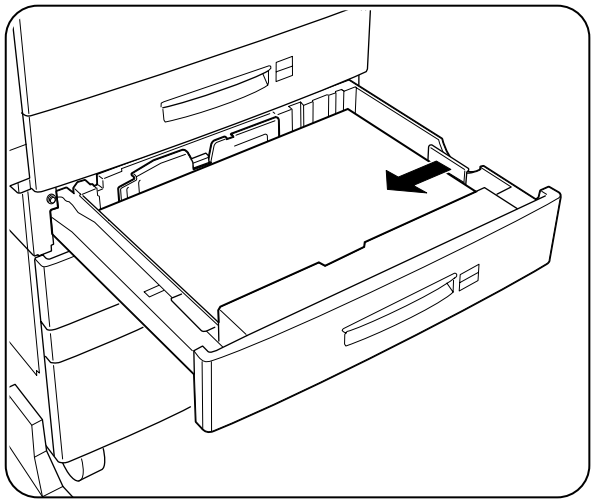


NOTE: Adjust the guide to the paper size correctly otherwise paper may not be transported correctly and may result in paper jam.

7. Align the edges of the paper stack

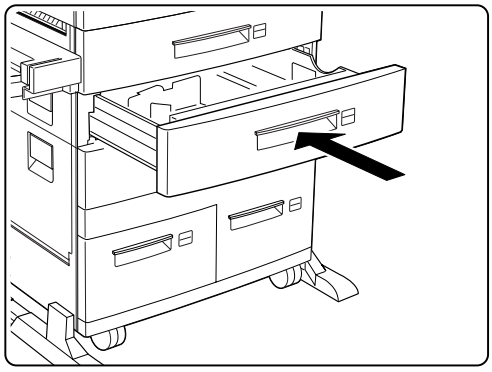


8. Adjust the length guide to the paper length.



NOTE: Make sure the guide stopper is locked firmly in the guide hole on the bottom of the cassette. Adjust the guide to the paper size correctly otherwise paper may not be transported correctly and may result in a paper jam.

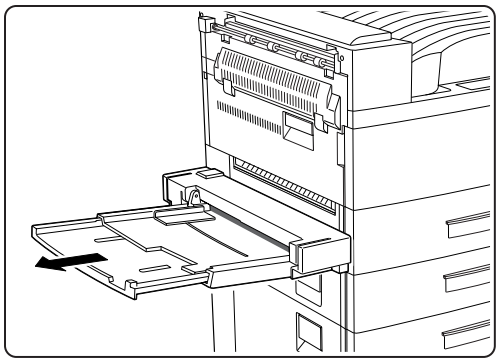
9. Insert a correct paper size label into the paper size slot on Tray 2, then push the cassette all the way back into the printer until it latches.



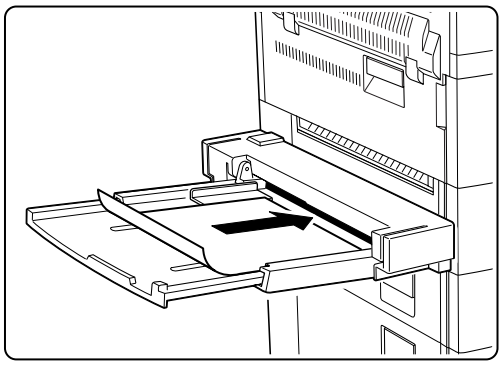
Adding paper to the multi bypass feeder

The multi bypass feeder can hold about 50 sheets (up to 80g/m^2 or about 3/16" or 5mm high) of paper. When adding paper, make sure the height of the paper stack is below the paper limit mark on the multi bypass feeder.

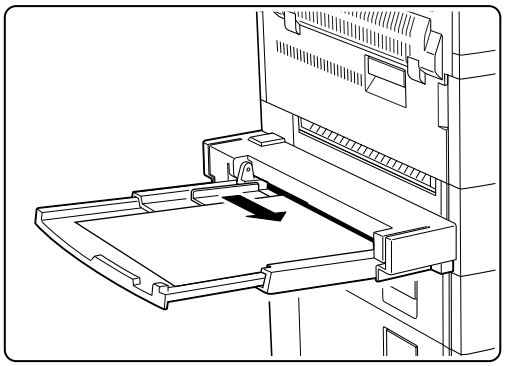
1. If necessary, pull out the extension tray to a length desired for the paper to be loaded.



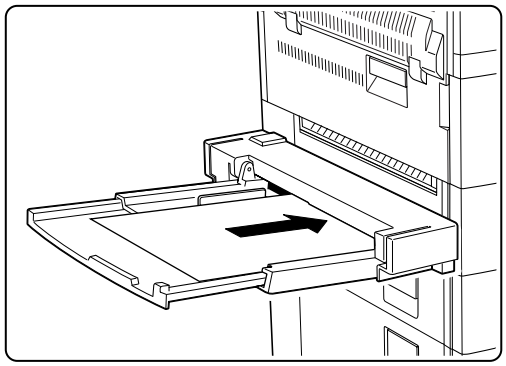
2. Place paper along the right side of the multi bypass feeder.



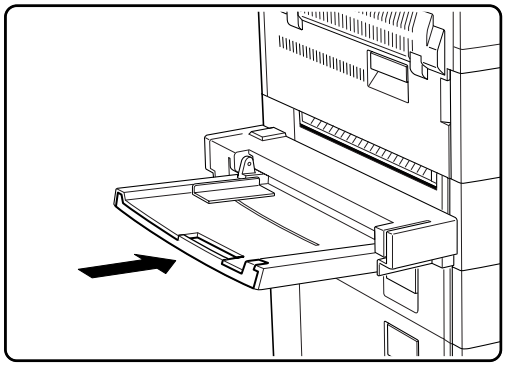
3. Push the paper guide until it slightly touches the paper stack.



4. Insert the paper stack as far as it can go into the printer. The paper is now ready for use.



5. When the paper is no longer required, remove it and push back the extension tray if necessary.

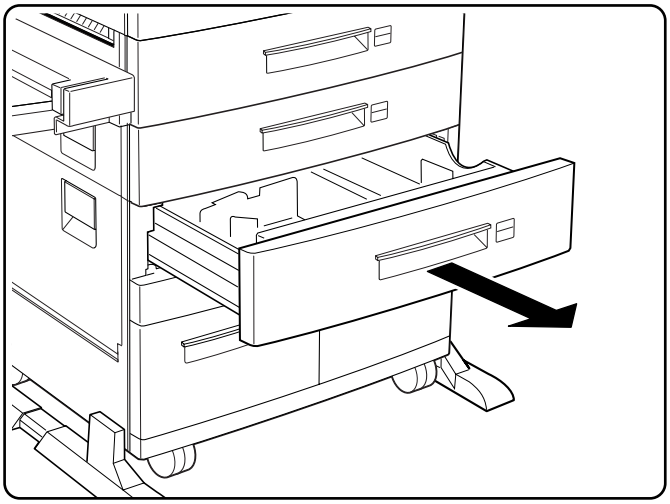


Adding paper to the HCF unit (2500-sheet)

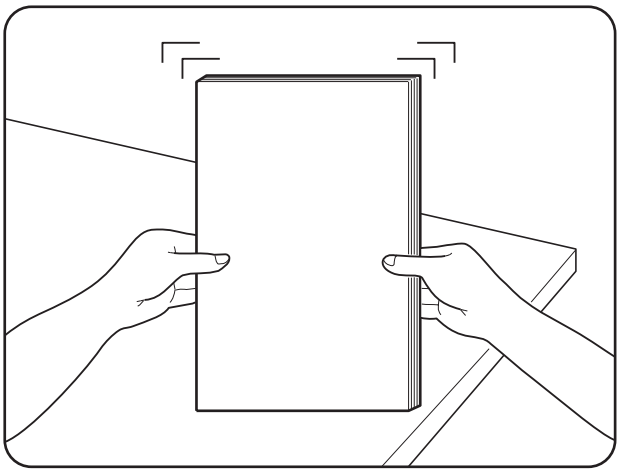
The HCF unit adds one 500-sheet universal paper cassette (Tray 3) and two A4/Letter size paper compartments (Trays 4 and 5) for high volume printing.

Tray 3 (500-sheet universal paper cassette)

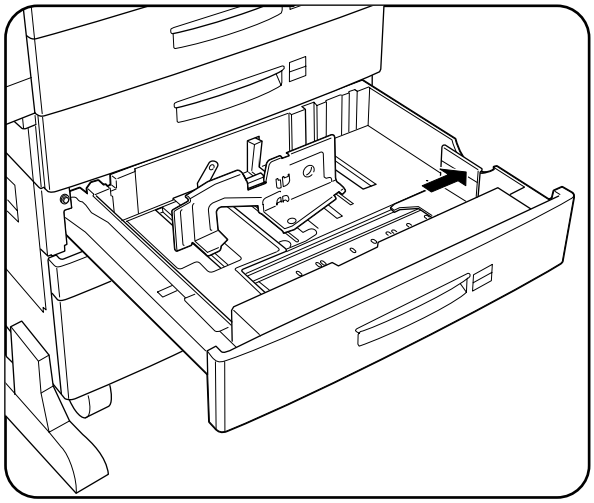
1. Pull out Tray 3 until it stops.



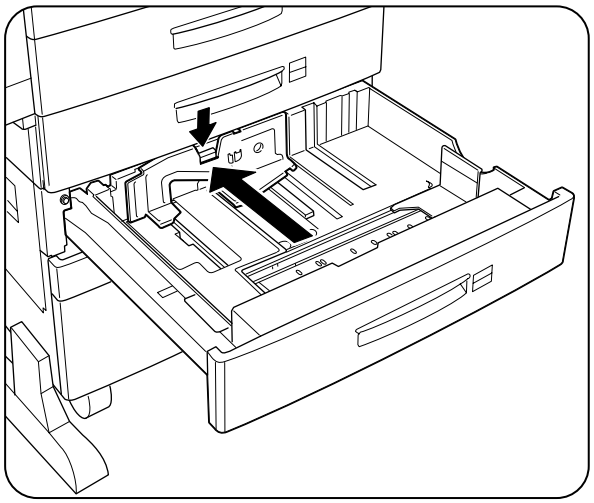
2. Prepare a stack of paper. Make sure the tops of the sheets are properly aligned.



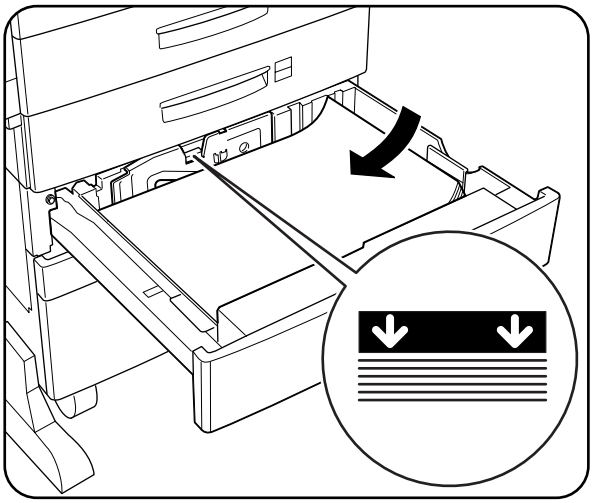
3. Gently lift up the length guide, and slide it all the way until it stops.



4. While pressing down the gray handle, slide the side guide all the way until it stops. If you will use the same paper as before, this step is not required.

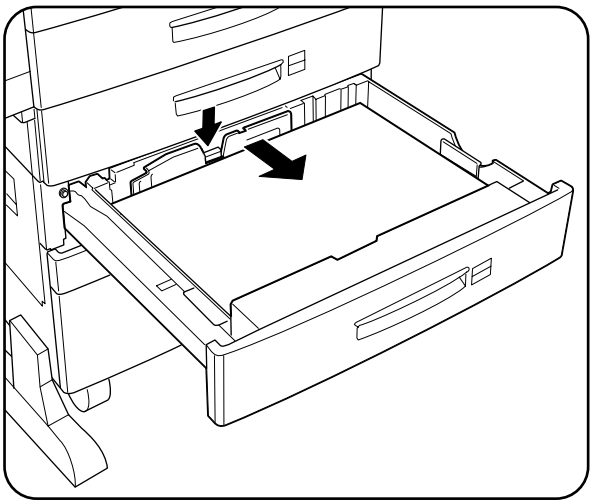


5. Align the four corners of the paper and place the paper in the cassette. The paper should enter easily between the guides. Make sure the paper does not get bent upwards by the guides.

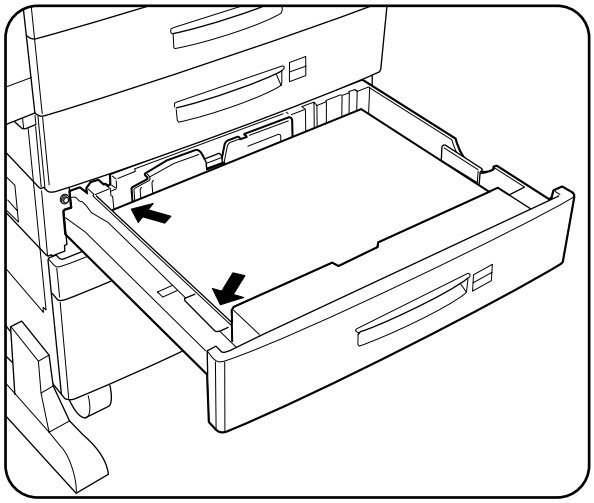


NOTE: Make sure the paper's stack height does not exceed the paper limit mark.

6. Adjust the side guide to the paper width.

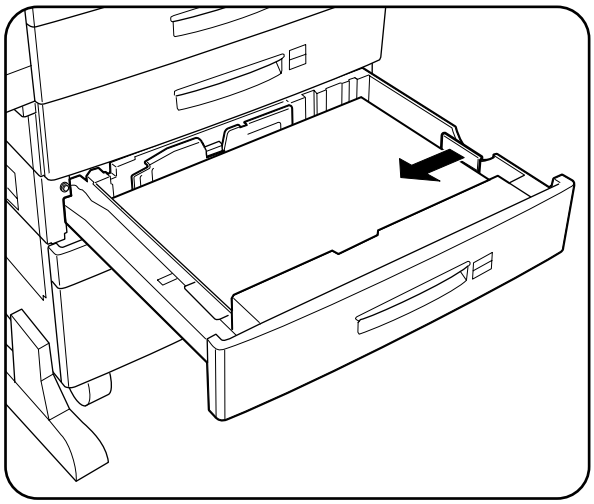


7. Align the edges of the paper stack.



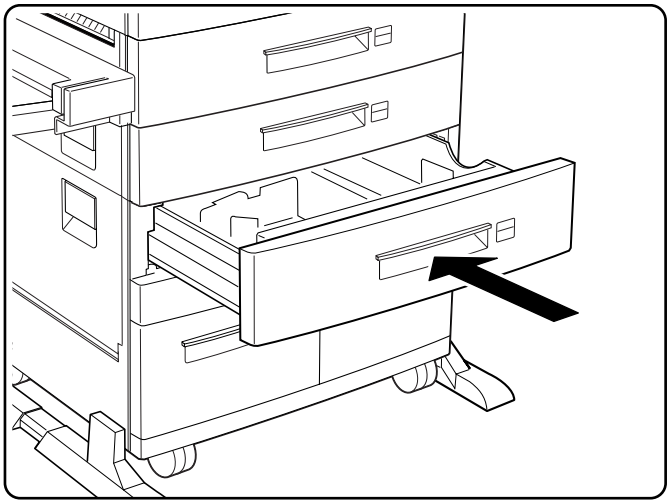
CAUTION: Adjust the guide to the paper size correctly otherwise paper may not be transported correctly and may result in a paper jam.

8. Adjust the length guide to the paper length.



CAUTION: Make sure the stack is under the retaining clips on both sides. Also make sure that the guide stopper is locked firmly in the guide hole on the bottom of the cassette. Adjust the vertical guide to the paper size correctly, otherwise paper may not be transported correctly and may result in paper jam.

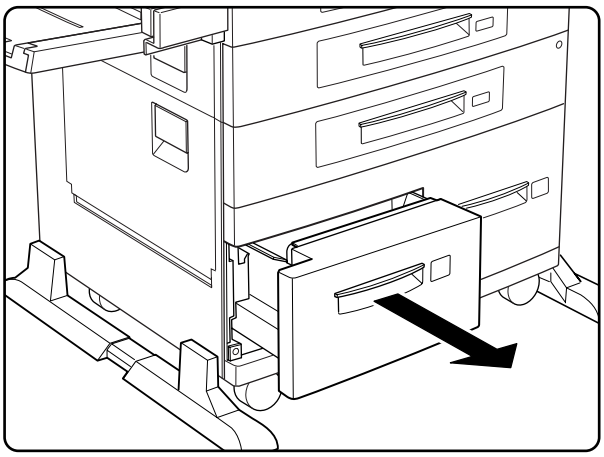
9. Insert a correct paper size label into the paper size slot on the cassette, then push the cassette all the way back into the printer until it latches.



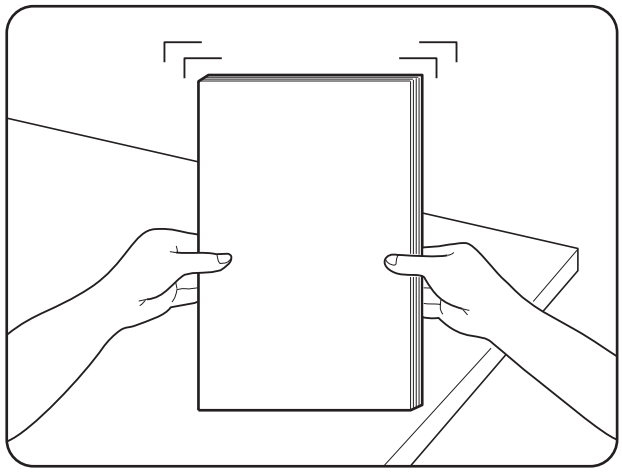
Trays 4 and 5 (A4/Letter size paper compartment)

Trays 4 and 5 are designated for printing of A4 or letter size paper. The following illustrate how to add paper using Tray 4, the left compartment, as an example.

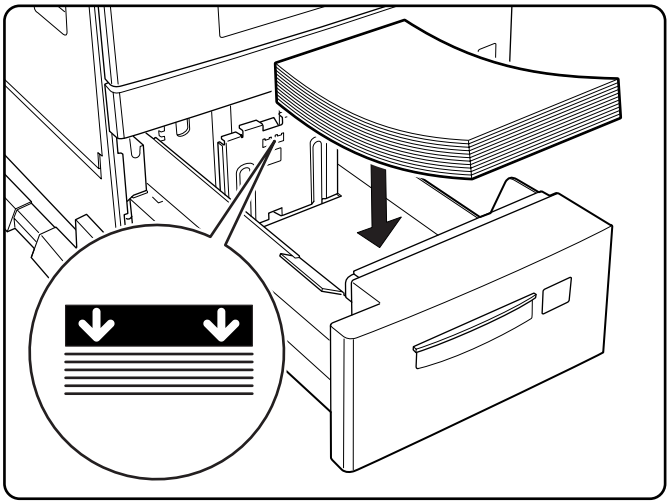
1. Pull on the latch to open Tray 4.



2. Prepare a stack of paper. Make sure the tops of the sheets are properly aligned.

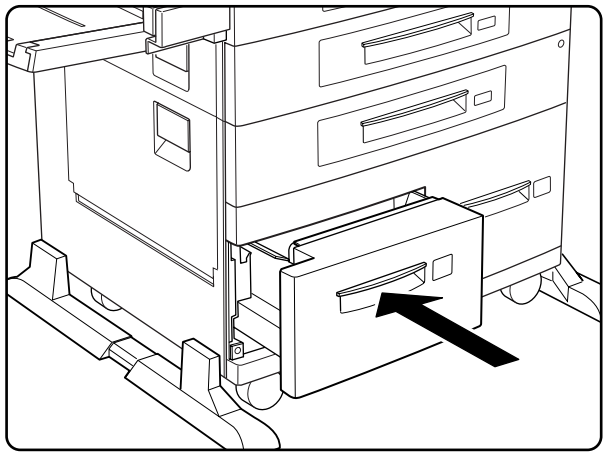


3. Insert paper into the compartment.



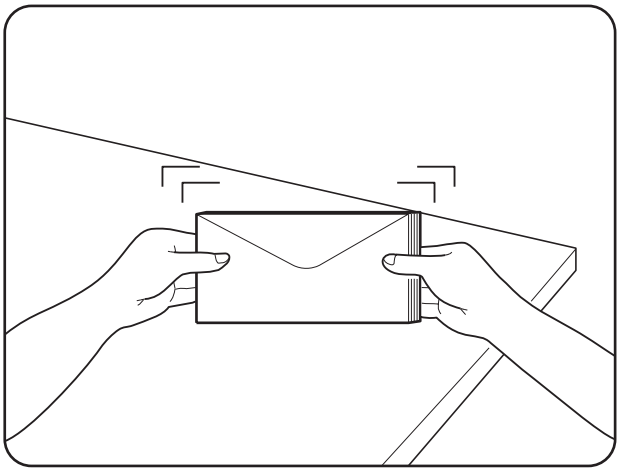
NOTE: Make sure the paper's stack height does not exceed the paper limit mark.

4. Push Tray 4 back into the printer.

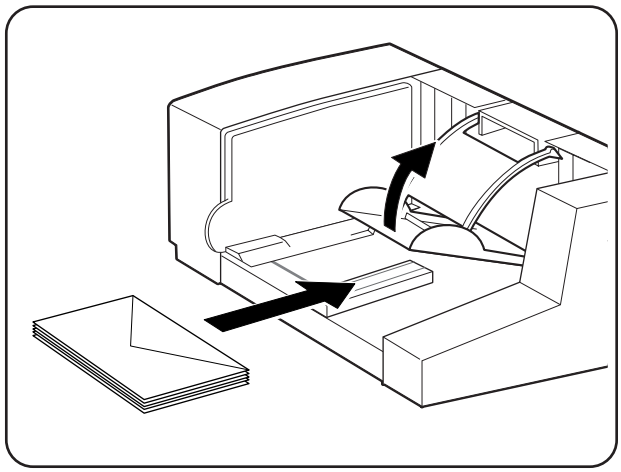


Loading envelopes into the envelope feeder

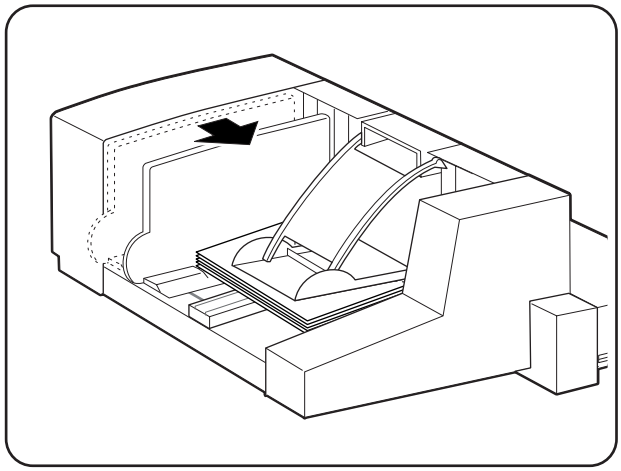
1. Prepare a stack of envelopes. Make sure the envelopes are not stuck together and all flaps are closed.



2. While lifting the envelope weight, insert envelopes with the flap-side up and the long edges leading first.



3. Slide the side guide so that it slightly touches the edges of the envelope stack



CAUTION: Make sure the envelopes do not exceed the paper limit mark. Do not add envelopes while printing otherwise a paper jam may result

◆ ◆ ◆.

Chapter 4

Understanding and Navigating the Control Panel Menus

In this Chapter . . .

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- "Control Panel Features" on page 4-2
- "Navigating the Control Panel Menus" on page 4-4
- "Menu Structure" on page 4-6
- "Paper Menu" on page 4-7
- "Interface Menu" on page 4-10
- "PS Menu" on page 4-12
- "PCL Menu" on page 4-14
- "System Menu" on page 4-17
- "Quality Menu" on page 4-19
- "Functions Menu" on page 4-20
- "Status Menu" on page 4-22

About this Chapter

This chapter explains the control panel and its functions, and also demonstrates how to navigate through the control panel menus and submenus that allow you to view and change the printer settings.

Control Panel Features

The control panel is located on the front of the printer, and contains the display, indicators, and pushbuttons that allow you to view and change the printer settings.

The figure below shows the control panel features.

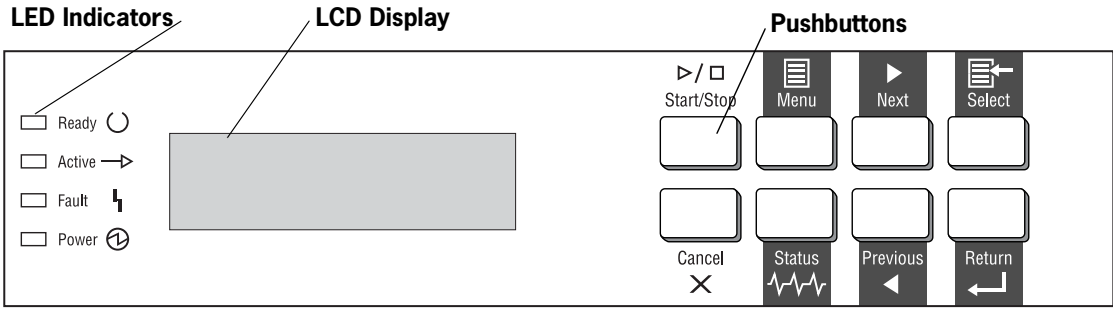

Figure 5-1: Control Panel.

LCD Display

The LCD display shows status and error messages that inform you of the current status of the printer, and also displays menus, submenus, and printer settings when you are in the menu system. The display contains two lines of text, each with a maximum of sixteen characters.

LED Indicators

The LED indicators also indicate printer status. The four indicators can each be on, off, or blinking, indicating different phases of printer operation. The table below explains the LED indicators.

LED	COLOR	WHEN OFF	WHEN ON	WHEN BLINKING
Ready	Green	Printer is NOT READY	Printer is READY	N/A
Active	Green	Printer is IDLE	Printer is ACTIVE (processing a job)	Printer is WAITING (a partial job has been printed, and the printer is waiting for additional job data)

LED	COLOR	WHEN OFF	WHEN ON	WHEN BLINKING
Fault	Yellow	Printer is not in error mode	There is an error that requires user intervention, such as a paper jam, a service call required, etc.	N/A
Power	Green	POWER is off	POWER is on	Power Saver Mode ON

Pushbuttons

The control panel pushbuttons allow you to access and navigate menus, and also assist you in recovering from printer errors. The table below explains the functions of the eight pushbuttons.

PUSHBUTTON	FUNCTION
▷/□ Start/Stop	START/STOP—Push this button to start or stop the printer, or to exit the menu system.
Menu	MENU—Push this button to enter the menu system.
Next	NEXT—Push this button to move to the next menu, submenu, or setting within the same level of the menu structure.
Select	SELECT—Push this button to select the menu or submenu that is shown on the second line of the display or to choose and save the setting shown on the second line of the display.
Cancel ✕	CANCEL—Push this button to cancel an action.
Status	STATUS—Push this button to enter the Status Menu and view the current status of printer.
Previous	PREVIOUS—Push this button to return to the previous menu, submenu, or option within the same level of the menu structure.
Return	RETURN—Push this button to move up one level in the menu structure to the menu shown on the first line of the display.

Navigating the Control Panel Menus

When you press the **MENU** button on the control panel, you enter the printer's menu system. At that point, the first line of the display contains the text "**Menu**", indicating that you are in the menu system. The second line of the display lists the active menu, which you can change by pressing the **NEXT** or **PREVIOUS** button.

If you press the **NEXT** button repeatedly, the second line of the display cycles through the main menus in the following order:

- Paper Menu
- Interface Menu
- PS Menu
- PCL Menu
- System Menu
- Quality Menu
- Functions
- Status

NOTE: Additional menus and submenus may appear in the printer menu system when other options are installed.

The following figure shows the sequence of pushbuttons and display messages that would allow you to change the number of copies printed. This example illustrates the basic relationship between menus and sub-menus and demonstrates how the **NEXT, PREVIOUS**, **SELECT**, and **RETURN** buttons help you to navigate through the menus.

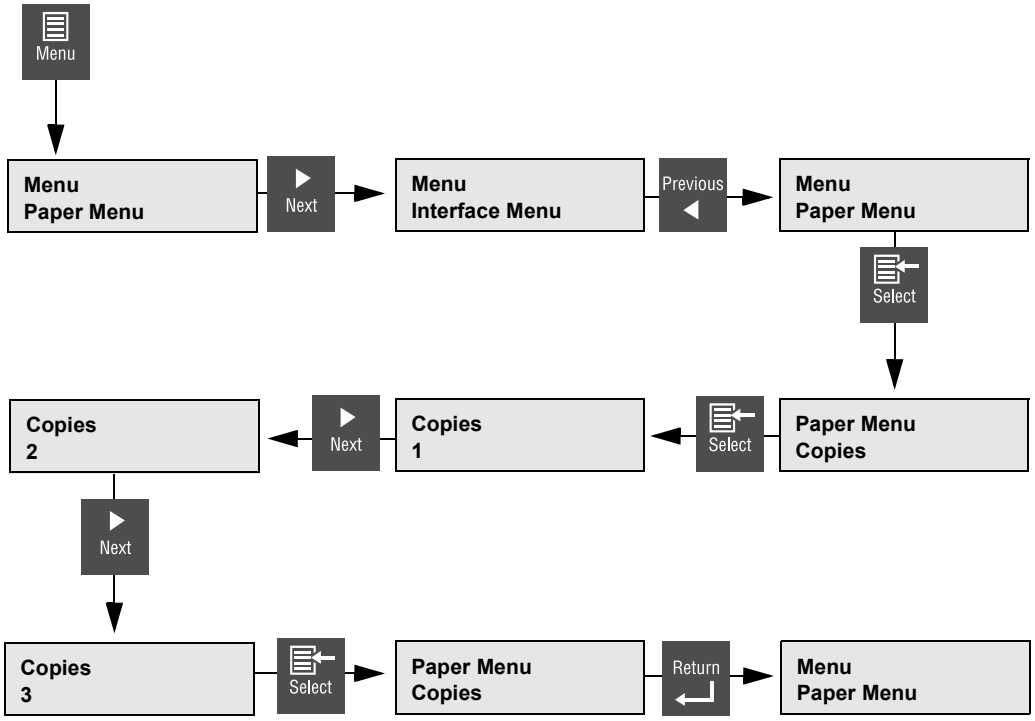

Figure 5-2: Navigating the Paper Menu.

1. Press the **MENU** button on the control panel.
2. Press the **NEXT** button until the text "**Paper Menu**" is shown on the second line of the display.
3. Press the **SELECT** button to enter the paper menu.
4. Press the **NEXT** button until the text "**Copies"** is shown on the second line of the display.
5. Press the **SELECT** button to enter the copies submenu.
6. Press the **NEXT** or **PREVIOUS** button to increase or decrease the number of copies printed.
7. Press the **SELECT** button to save this setting.
8. Press the **START/STOP** button to exit the menu system.

Menu Structure

The following figure shows the structure of the control panel main menus and submenus.

Figure 5-3: Printer Menu Structure.

NOTE: Additional menus and submenus may appear in the printer menu system when other options are installed.

Paper Menu

The **Paper Menu** provides access to the printer settings for various paper-handling functions. Use the following procedure to enter the paper menu:

1. Press the **MENU** button on the control panel.
2. Press the **NEXT** button until the text "**Paper Menu**" is shown on the second line of the display.
3. Press the **SELECT** button to enter the Paper Menu.
4. Press the **NEXT** button to move through the submenus.
5. Use the procedures in the following table to access and change the printer paper-handling settings:

Submenus	Default Setting	Available Settings	Procedure for Changing Setting
Copies This submenu allows you to change the number of copies printed.	1	Numbers 1 - 999	1. Press NEXT or PREVIOUS to increase or decrease the number of copies printed. 2. Press SELECT to save this setting.
Default Source This submenu allows you to choose a default paper source from a list of all installed sources.	Tray 1	MBF Tray 1 Tray 2 Tray 3 (optional) Tray 4 (optional) Tray 5 (optional)	1. Press NEXT or PREVIOUS to scroll through the list of available sources of paper. 2. Press SELECT to set a source as the default.
Manual Feed This submenu allows you to turn the manual feed on or off.	Off	On Off	1. Press NEXT or PREVIOUS to toggle between ON and OFF. 2. Press SELECT to save this setting.
Output Tray This submenu allows you to choose a default output tray from a list of all installed output trays.	Face Down Tray	Face Down Tray Stacker (optional)	1. Press NEXT or PREVIOUS to scroll through the list of available output trays. 2. Press SELECT to set a tray as the default.

Media Size/Type This submenu allows you to set the media size and type for the MBF Tray and set the medial type for all other trays.	**MBF** Size: Letter LEF Type: Plain **Tray 1** Type: Plain **Tray 2** Type: Plain **Tray 3** (optional) Type: Plain **Tray 4** (optional) Type: Plain **Tray 5** (optional) Type: Plain	**Size** MBF: Letter LEF, A4 LEF, B5 LEF, A5, A6, Statement, Executive, C5 Envelope, DL Envelope, Com10 Envelope, Monarch Envelope, Ledger, A3, B4, Legal, Folio, A4 SEF, Letter SEF	**Type** MBF: Plain, Transparency, Prepunched, Letterhead, Colored, Preprinted, Bond, Label, Card Stock, Postcard, Envelope, Other Other Trays: Plain, Transparency, Prepunched, Letterhead, Colored, Preprinted, Bond, Other	1. Press NEXT or PREVIOUS to scroll through the list of available sources of paper. 2. Press SELECT to choose a tray. 3. Press NEXT or PREVIOUS to toggle between MEDIA SIZE and MEDIA TYPE. 4. Press SELECT to choose either. 5. Press NEXT or PREVIOUS to scroll through the available sizes or types. 6. Press SELECT to set a size or type.
Tray Linking This submenu allows you to turn the tray linking function on or off.	On	On Off		1. Press NEXT or PREVIOUS to toggle between ON and OFF. 2. Press SELECT to save this setting.
Job Offset	Off	On Off		1. Press NEXT or PREVIOUS to toggle between ON and OFF. 2. Press SELECT to save this setting.
Blank Pages This submenu allows you to choose to either print or not print blank pages of a document.	Print	Print Do Not Print		1. Press NEXT or PREVIOUS to toggle between PRINT and DO NOT PRINT. 2. Press SELECT to save this setting.
Staple Mode This submenu allows you to choose a staple mode for the Finisher/Stapler option. This submenu is only available if the Finisher/Stapler is installed.	Off	Dual Off Front Rear		1. Press NEXT or PREVIOUS to locate your preferred staple mode. 2. Press SELECT to save this setting.
Face Up Inst	No	No Yes		1. Press NEXT or PREVIOUS to toggle between NO and YES. 2. Press SELECT to save this setting.

Hole Punch This submenu allows you to turn the Hole Punch feature on and off. This submenu is only available if the Finisher/Stapler is installed.	Off	On Off	1. Press NEXT or PREVIOUS to toggle between ON and OFF. 2. Press SELECT to save this setting.
MBF First	Off	On Off	1. Press NEXT or PREVIOUS to toggle between ON and OFF. 2. Press SELECT to save this setting.

Interface Menu

The **Interface Menu** provides access to the printer interface settings. Use the following procedure to enter the interface menu:

1. Press the **MENU** button on the control panel.
2. Press the **NEXT** button until the text "**Interface Menu**" is shown on the second line of the display.
3. Press the **SELECT** button to enter the interface menu.
4. Press the **NEXT** button to move through the submenus: **Port**, **Parallel Setup**, **and Network Setup**.
5. Use the procedures in the following table to access and change the printer interface settings:

Submenus	Default Setting	Available Settings	Procedure for Changing Setting
Port This submenu allows you to enable the type of interface.	**Parallel:** On **Network Card 1:** Off	**Parallel:** On, Off **Network Card 1:** On, Off	1. Press NEXT or PREVIOUS to toggle between PARALLEL and NETWORK CARD 1. 2. Press SELECT to save this setting.

Parallel Setup This submenu allows you to set up the parallel interface.	**Interpreter:** Auto Switch **Format:** Raw **Mode:** Bidirectional **Delay Out Close:** Off	**Interpreter:** Auto Switch PCL PostScript 3 **Format:** Raw Normal Binary **Mode:** Bidirectional Standard **Delay Out Close:** Off On	1. Press NEXT or PREVIOUS to scroll through the INTERPRETER, FORMAT, MODE, and DELAY OUT CLOSE submenus. 2. Press SELECT to choose a submenu. 3. Press NEXT or PREVIOUS to scroll through the settings. 4. Press SELECT to choose and save a setting.

Network 1 Setup This submenu allows you to set up the Network interface.	**Interpreter:** Auto Switch **Format:** Raw **Network Channel:** Netware **Network Address:** **IP Address:** (user-specified) **Subnet Mask:** (user-specified) **Default Router:** (user-specified) **LPD Banner:** On **DHCP:** Off **Network Frame:** Auto-Sense **Delay Out Close:** Off	**Interpreter:** Auto Switch PCL PostScript 3 **Format:** Raw Normal Binary **Network Channel:** DEC LAT, AppleTalk, TCP/IP **Network Address:** **IP Address:** (user-specified) **Subnet Mask:** (user-specified) **Default Router:** (user-specified) **LPD Banner:** On Off **DHCP:** Off On **Network Frame:** 802.3, Ethernet II, 802.2 SNAP, 802.2 **Delay Out Close:** Off On	1. Press NEXT or PREVIOUS to move among the submenus. 2. Press SELECT to choose a submenu. 3. Press NEXT or PREVIOUS to scroll through the settings. 4. Press SELECT to save this setting.

PS Menu

The PS Menu provides access to the PostScript settings. Use the following procedure to enter the PS Menu:

1. Press the **MENU** button on the control panel.
2. Press the **NEXT** button until the text "**PS Menu**" is shown on the second line of the display.
3. Press the **SELECT** button to enter the PS menu.
4. Press the **NEXT** button to move through the submenus: **Print PS Errors**, and **Manual Feed TO.**
5. Press the **SELECT** button to enter a submenu.
6. Use the procedures in the following table to access and change the PostScript settings:

Submenus	Default Setting	Available Settings	Procedure for Changing Settings
Print PS Errors This submenu allows you to choose to either print or not print PS errors.	Off	On Off	1. Press NEXT or PREVIOUS to toggle between ON (print) and OFF (do not print). 2. Press SELECT to save this setting.
Manual Feed TO This submenu allows you to set the manual feed timeout—the number of seconds the printer should wait for a manual feed. A setting of 0 will cause printer to wait indefinitely for a manual feed.	0	0 - 99999	1. Press NEXT or PREVIOUS to increase or decrease each digit of the five-digit number. 2. Press SELECT to move to the next number. 3. Press SELECT after setting the last digit to save the setting.

PCL Menu

The **PCL Menu** provides access to the PCL settings. Use the following procedure to enter the PCL menu:

1. Press the **MENU** button on the control panel.
2. Press the **NEXT** button until the text "**PCL Menu**" is shown on the second line of the display.
3. Press the **SELECT** button to enter the PCL menu.
4. Press the **NEXT** button to move through the submenus: **Print PS Errors, Manual Feed TO.**
5. Press the **SELECT** button to enter a submenu.
6. Use the procedures in the following table to access and change the PCL settings:

Submenus	Default Setting	Available Settings	Procedure for Changing Setting
Orientation This submenu allows you to choose the orientation of the page.	Portrait	Portrait Landscape	1. Press NEXT or PREVIOUS to toggle between PORTRAIT and LANDSCAPE. 2. Press SELECT to choose and save an orientation.
Font Source This submenu allows you to choose a font source.	Internal	Internal	1. Press NEXT or PREVIOUS to scroll through the available font sources. 2. Press SELECT to choose and set a source.
Font Number This submenu allows you to set the font number.	0	Numbers 0-?	1. Press NEXT or PREVIOUS to increase or decrease the font number. 2. Press SELECT to save this setting.
Pitch This submenu allows you to change the pitch of text.	10.00	0.08 - 100.00	1. Press NEXT or PREVIOUS to increase or decrease the pitch. 2. Press SELECT to save this setting.
Symbol Set This submenu allows you to choose a symbol set.	10U:PC-8 CP437	10U:PC-8 CP437 11U:PC-8 D/N 12U:PC-850 17U:PC-852 9T:PC-Turkish 19U:WIN Latin1 9E:WIN Latin2 5T:WIN Latin5 7J:Desk Top 10J:PS Text 13J:Ventura Intl 14J:Ventura US 6J:Microsoft Pub 8M:Math-8 PS:Math 6M:Ventura Math 15U:Pi Font 1U: Legal 1E: ISO4 UK 0U:ISO6 ASCII 0S:ISO11 Swedish 0I:ISO15 Italian 2S:ISO17 Spanish 1G:ISO21 German 0D:ISO60 Norweg. 1F:ISO69 French 9U:WIN3.0 Latin1 8U:Roman 8 0N:ISO 8859-1 2N:ISO 8859-2 5N:ISO 8859-5	1. Press NEXT or PREVIOUS to scroll through the available symbol sets. 2. Press SELECT to choose and set a symbol set.

Macro Filter This submenu allows you to turn the macro filter on or off.	Off	On Off	1. Press NEXT or PREVIOUS to toggle between ON and OFF. 2. Press SELECT to save this setting.
Lines Per Page This submenu allows you to change the number of lines per page.	45	5 - 128	1. Press NEXT or PREVIOUS to increase or decrease the lines per page. 2. Press SELECT to save this setting.
CR Mode This submenu allows you top define the action prompted by a carriage return—a carriage return equals either a carriage return alone, or a carriage return and a line feed together.	CR = CR	CR = CR CR = CR/LF	1. Press NEXT or PREVIOUS to choose from CR=CR or CR=CR/LF. 2. Press SELECT to save this setting.
LF Mode This submenu allows you to define the action prompted by a line feed—a line feed equals either a line feed alone or a carriage return and a line feed together.	LF = LF	LF = LF LF = CR/LF	1. Press NEXT or PREVIOUS to choose from LF=LF or LF=CR/LF. 2. Press SELECT to save this setting.
FF Mode This submenu allows you to define the action prompted by a form feed—a form feed equals either a form feed alone or a carriage return and a form feed together.	FF = FF	FF = FF FF = CR/FF	1. Press NEXT or PREVIOUS to choose from FF=FF or FF=CR/FF. 2. Press SELECT to save this setting.

Print Area This submenu allows you to set the print area.	Normal	Normal Expanded		1. Press NEXT or PREVIOUS to toggle between the NORMAL and EXPANDED settings. 2. Press SELECT to save this setting.
Parameter Values	**Paper Source:** MBF **Paper Size:** Executive	**Paper Source:** MBF Tray 1 Tray 2 Tray 3 Tray 4 Tray 5 Auto-select	**Paper Size:** Executive, Letter, Legal, Statement, Folio, Ledger, A6, A5, A4, B5, B4, Monarch Envelope, Com10 Envelope, DL Envelope, CS Envelope	1. Press NEXT or PREVIOUS to toggle between the PAPER SOURCE and PAPER SIZE submenus. 2. Press SELECT to choose a submenu. 3. Press NEXT or PREVIOUS to scroll through the settings. 4. Press SELECT to save this setting.

System Menu

The system menu provides access to system settings. Use the following procedure to enter the system menu:

1. Press the **MENU** button on the control panel.
2. Press the **NEXT** button until the text "**System Menu**" is shown on the second line of the display.
3. Press the **SELECT** button to enter the system menu.
4. Press the **NEXT** button to move through the submenus: **Factory Defaults, Display Language, Power Saver, Wait Timeout, Job Timeout, Jam Recovery, Hex Print, and Toner Out.**
5. Press the **SELECT** button to enter a submenu.
6. Use the procedures in the following table to access and change the system settings:

Submenus	Default Setting	Available Settings	Procedure for Changing Setting
Factory Defaults This submenu allows you to reset the printer to U.S. or Non-U.S. factory defaults.	U.S.	U.S. Non-U.S.	1. Press NEXT or PREVIOUS to toggle between U.S. and NON-U.S. 2. Press SELECT to choose and set the factory defaults.
Display Language This submenu allows you to change the language of the display messages.	English	English Francais (French) Deutsch (German) Italiano (Italian) Espanol (Spanish)	1. Press NEXT or PREVIOUS to scroll through the available languages: English, French (Francais), German (Deutsch), Italian (Italiano), or Spanish (Espanol). 2. Press SELECT to choose and set the language.
Alarm Control This submenu allows you to set the alarm control.	Single	Single Continuous Off	1. Press NEXT or PREVIOUS to move among the alarm settings. 2. Press SELECT to choose and set the alarm setting.
Power Saver This submenu allows you to set the number of minutes the printer is idle before it reverts to Power Saver Mode.	15	0 - 999	1. Press NEXT or PREVIOUS to increase or decrease the number of minutes. 2. Press SELECT to save this setting.
Wait Timeout This submenu allows you to increase or decrease the length of time (in seconds) that the printer will remain in the waiting state—a job is being processed, no end-of-file has been detected, and there is no more data to process. This setting applies to *both PCL and PostScript print jobs.*	20	0 - 99999	1. Press NEXT or PREVIOUS to increase or decrease each digit of the five-digit number. 2. Press SELECT set one digit and move to the next digit. 3. Press SELECT after changing the last digit to save this setting.

Job Timeout This submenu allows you to increase or decrease the time limit (in seconds) for PostScript jobs. A 0 setting indicates no timeout. This setting applies *only to PostScript jobs*.	0	0 - 99999	1. Press NEXT or PREVIOUS to increase or decrease each digit of the five-digit number. 2. Press SELECT set one digit and move to the next digit. 3. Press SELECT after changing the last digit to save this setting.
Jam Recovery This submenu allows you to turn jam recovery on or off.	On	On Off	1. Press NEXT or PREVIOUS to toggle between ON and OFF. 2. Press SELECT to save this setting.
Hex Print This submenu allows you to print hexadecimal characters.	Off	On Off	1. Press NEXT or PREVIOUS to toggle between ON and OFF. 2. Press SELECT to save this setting.
Toner Out This submenu allows you to specify whether the printer should stop or continue when out of toner.	Stop	Stop Continue	1. Press NEXT or PREVIOUS to toggle between STOP and CONTINUE. 2. Press SELECT to save this setting.

Quality Menu

The Quality Menu provides access to the printer settings that are related to print quality. Use the following procedure to enter the Quality Menu:

1. Press the **MENU** button on the control panel.
2. Press the **NEXT** button until the text "**Quality Menu**" is shown on the second line of the display.
3. Press the **SELECT** button to enter the system menu.
4. Press the **NEXT** button to move through the submenus: **Resolution, Enhancement, Toner Saver, and Print Density.**
5. Press the **SELECT** button to enter a submenu.
6. Use the procedures in the following table to access and change the system settings:

Submenus	Default Setting	Available Settings	Procedure for Changing Setting
Resolution This submenu allows you to set the resolution (dpi).	600 dpi	300 dpi 600 dpi	1. Press NEXT or PREVIOUS to scroll through the available resolutions. 2. Press SELECT to choose and set the dpi.
Enhancement This submenu allows you to choose an enhancement method.	None	None Edge Photo Edge & Photo	1. Press NEXT or PREVIOUS to scroll through the available enhancements. 2. Press SELECT to choose and set the enhancement.
Toner Saver This submenu allows you to choose from several toner-saving settings.	Off	Off Light Lighter Lightest	1. Press NEXT or PREVIOUS to scroll through the available toner settings. 2. Press SELECT to choose and save this setting.
Print Density This submenu allows you to specify the print density. 1 represents the lightest print density, while 7 represents the darkest print density.	5	Numbers 1-7	1. Press NEXT or PREVIOUS to scroll through the available print density settings. 2. Press SELECT to choose and save this setting.

Functions Menu

The Functions Menu provides access to several printer functions that can supply you with information about the printer and its settings. Use the following procedure to enter the Functions Menu:

1. Press the **MENU** button on the control panel.
2. Press the **NEXT** button until the text "**Functions Menu**" is shown on the second line of the display.
3. Press the **SELECT** button to enter the system menu.
4. Press the **NEXT** button to move through the available functions: **Reset Printer, Print Summary, Print test, and Print Fonts.**
5. Use the procedures in the following table to execute the functions:

Functions	Procedure for Executing Function
Reset Printer This function resets the printer.	Press SELECT to reset the printer.
Print Summary This function prints a list of all printer settings:	Press SELECT to print a summary of the printer settings.
Print Test This function allows you to print a single test page or a continuous test page.	1. Press NEXT or PREVIOUS to toggle between SINGLE PAGE and CONTINUOUS. 2. Press SELECT to print the test page(s).
Print Fonts This function allows you to print Postscript or PCL font lists.	1. Press NEXT or PREVIOUS to toggle between POSTSCRIPT and PCL. 2. Press SELECT to select and print the specific fonts list.

FLASH Menu

NOTE: This menu will only appear if an optional FLASH DIMM has been installed in the FLASH DIMM slot. Consult the documentation that came with your FLASH DIMM for detailed installation and usage instructions.

The FLASH Menu provides access to the printer settings that are related to the optional FLASH DIMM. Use the following procedure to enter the FLASH Menu:

1. Press the **MENU** button on the control panel.
2. Press the **NEXT** button until the text "**FLASH Menu**" is shown on the second line of the display.
3. Press the **SELECT** button to enter the system menu.
4. Press the **NEXT** button to move through the submenus: **Print, Delete, Format FLASH, and FLASH summary.**
5. Press the **SELECT** button to enter a submenu.

6. Use the procedures in the following table to access and change the system settings:

Submenus	Procedure for Changing Setting
Print This selection will read the selected file from FLASH and print it as if it were being received from one of the input ports.	1. Press NEXT or PREVIOUS to scroll through the files. 2. Press SELECT to choose and print the file.
Delete This selection will delete the selected disk file or directory from the FLASH DIMM. To delete an entire directory, you must first delete all the files within that directory.	1. Press NEXT or PREVIOUS to scroll through the files. 2. Press SELECT to choose and delete the file.
Format Flash This selection will reformat the FLASH DIMM.	1. Press SELECT to reformat the FLASH DIMM.
Flash Summary This selection will print a page containing information about the installed FLASH DIMM including a list of all the current existing files and directories.	1. Press SELECT to print the FLASH summary.

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WARNING! All files on the FLASH DIMM will be deleted if the **Format FLASH** function is selected.

DISK Menu

NOTE: This menu selection will only appear if an optional hard disk drive has been installed. Consult the documentation that came with your hard disk drive for detailed installation and usage instructions.

The Disk Menu provides access to the printer settings that are related to the optional Hard Disk. Use the following procedure to enter the Disk Menu:

1. Press the **MENU** button on the control panel.
2. Press the **NEXT** button until the text "**Disk Menu**" is shown on the second line of the display.
3. Press the **SELECT** button to enter the system menu.
4. Press the **NEXT** button to move through the submenus: **Print, Delete, Format Disk, and Disk Summary.**
5. Press the **SELECT** button to enter a submenu.

6. Use the procedures in the following table to access and change the system settings:

Submenus	Procedure for Changing Setting
Print This selection will read the selected file from Disk and print it as if it were being received from one of the input ports.	1. Press NEXT or PREVIOUS to scroll through the files. 2. Press SELECT to choose and print the file.
Delete This selection will delete the selected disk file or directory from the hard disk. To delete an entire directory, you must first delete all the files within that directory.	1. Press NEXT or PREVIOUS to scroll through the files. 2. Press SELECT to choose and delete the file.
Format Disk This selection will reformat the hard disk.	1. Press SELECT to reformat the hard disk.
Disk Summary This selection will print a page containing information about the installed hard disk, including a list of all the current existing files and directories.	1. Press SELECT to print the Disk summary.

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WARNING! All files on the hard disk will be deleted if the **Format Disk** function is selected.

Status Menu

In addition to the main menus listed above, the printer also provides a status menu that allows you to view the current settings for the input and output trays and the toner cartridge. Use the following procedure to enter the Status Menu:

1. Press the **STATUS** button on the control panel.
2. Press the **NEXT** button to move through the submenus: **MBF, Tray 1, Tray 2, Face Down, and Toner.**
3. Press the **SELECT** button to enter a submenu.
4. Use the procedures in the following table to view the status of the printer:

Submenu	Procedure for Executing Function
MBF This submenu allows you to view the current Media Size and Media Type for the MBF tray.	1. Press NEXT or PREVIOUS to scroll through the MEDIA SIZE, MEDIA TYPE, and LEVEL settings for the MBF. 2. Press SELECT to view a specific setting.
Tray 1 This submenu allows you to view the current Media Size, Media Type, and Level for Tray 1.	1. Press NEXT or PREVIOUS to scroll through the media size, media type, and level settings for Tray 1. 2. Press SELECT to view a specific setting.

Tray 2 This submenu allows you to view the current Media Size, Media Type, and Level for Tray 2.	1. Press NEXT or PREVIOUS to scroll through the media size, media type, and level settings for Tray 2. 2. Press SELECT to view a specific setting.
Tray 3 (optional) This submenu allows you to view the current Media Size, Media Type, and Level for Tray 3.	1. Press NEXT or PREVIOUS to scroll through the media size, media type, and level settings for Tray 3. 2. Press SELECT to view a specific setting.
Tray 4 (optional) This submenu allows you to view the current Media Size, Media Type, and Level for Tray 4.	1. Press NEXT or PREVIOUS to scroll through the media size, media type, and level settings for Tray 4. 2. Press SELECT to view a specific setting.
Tray 5 (optional) This submenu allows you to view the current Media Size, Media Type, and Level for Tray 5.	1. Press NEXT or PREVIOUS to scroll through the media size, media type, and level settings for Tray 5. 2. Press SELECT to view a specific setting.
Face Down Tray This submenu allows you to view the status of the face down tray.	1. Press SELECT to view the status of the Face Down Tray.
Stacker This submenu allows you to view the status of the Finisher/Stapler main tray. This menu is only available if the Finisher/Stapler option is installed.	1. Press SELECT to view the status of the Stacker tray.
Toner Press SELECT to view the status of the toner cartridge.	

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Chapter 5

Printer Consumables, Cleaning and Maintenance

In this Chapter . . .

- "About this Chapter" on page 5-2
- "Replacing the EP Cartridge" on page 5-2
- "Replacing the Fuser" on page 5-13
- "Replacing the Transfer Roller" on page 5-19
- "Replacing the Feed Rollers" on page 5-20
- "Cleaning" on page 5-26
- "Daily Maintenance" on page 5-28
- "Preparing the Printer for a Period of Extended Non-Use" on page 5-28
- "Relocating the Printer" on page 5-30

About this Chapter

Describes how to handle and replace the EP cartridge, replacement of transfer and feed rollers and performance of other steps as necessary for day-to-day operation of your printer.

Replacing the EP Cartridge

Cautions on handling the EP cartridge

- Do not expose the cartridge to direct sunlight or other strong light sources.
- Do not carry out the procedure in a brightly lit location, and complete the installation procedure as quickly as possible (within about 5 minutes).
- When the EP cartridge is removed from the printer, immediately put it back to its original packing or wrap it with a thick lint-free cloth.
- If the EP cartridge is moved from a cold location to a warm location, let it rest for 1 hour or more before using it.
- Do not turn the cartridge over and do not stand it on its end.
- Toner is not harmful to the human body, but if some toner has come into contact with your skin, you can wash it off with warm water and soap. If toner gets on your clothing, you should immediately try to blow it off with compressed air.
- The drum shutter protects the photosensitive drum from external light. Do not open the drum shutter by hand.
- Never touch the surface of the photosensitive drum.

Cautions on storing the EP cartridge

- Do not remove the EP cartridge from its packing until use. If it is removed, immediately put it back into the packing.
- Avoid direct sunlight. Keep the EP cartridge in the following environment:
  Temperature: 50º to 95º F (10 to 35º C)
  Humidity: 15 to 85% (non-condensation)
- Do not place the EP cartridge in a location with high temperature and high humidity.
- Do not turn the cartridge over and do not stand it on its end.
- Keep the EP cartridge away from CRT, disk drive, floppy drive, or any magnetic objects.
- Keep the EP cartridge out of reach of children.

When to replace the EP cartridge

The EP cartridge contains a photosensitive drum and toner. It can print about 23,000 pages of letter or A4 size paper (assuming 5% coverage).

The printer shows the following messages when it is time to replace the EP cartridge:

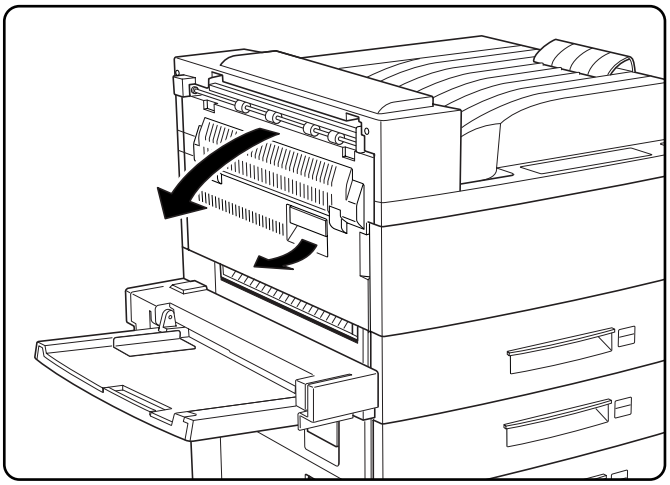
When the EP cartridge should be replaced soon, the “TONER LOW” message appears. Prepare a new EP cartridge.

When there is no more toner or the drum must be replaced, an error message appears and the printer stops. Follow the steps described in the following sections to replace the EP cartridge with a new one. Be sure to use only the designated EP cartridge. Consult your dealer for more information.

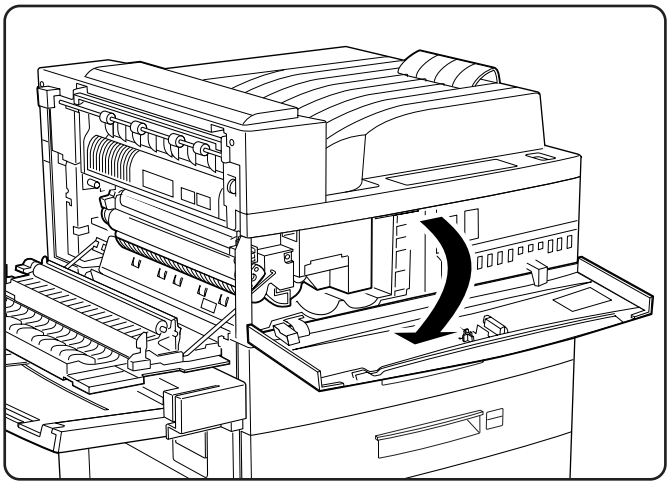
Do not shake the EP cartridge in order to check for toner level. A tiny amount of toner left may spill out.

Replacing the EP cartridge (for standard configuration)

1. Hold the latch and open the upper left cover.

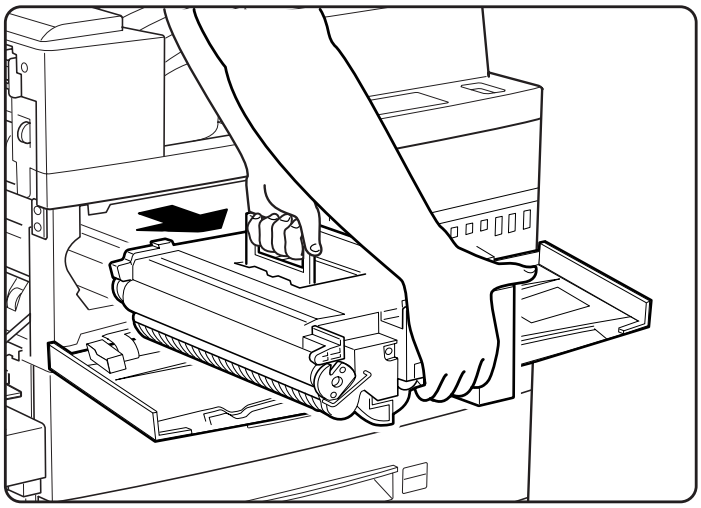


2. Open the front cover as indicated.

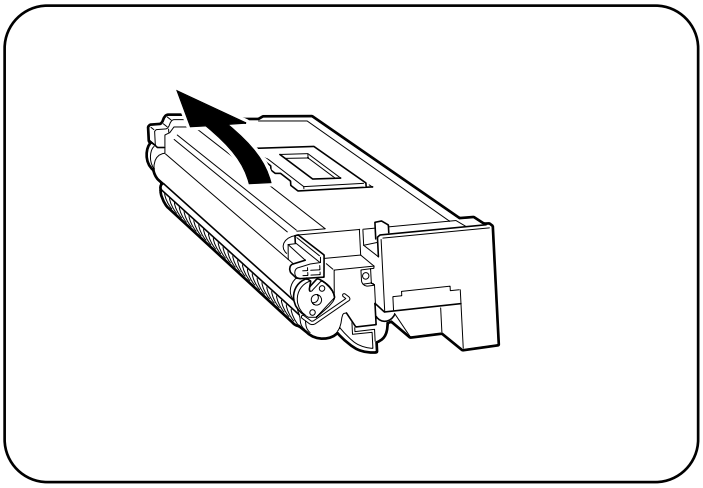


WARNING: Never touch the fuser area where a label indicating high temperature is located (such as that shown below), or else burns may result.

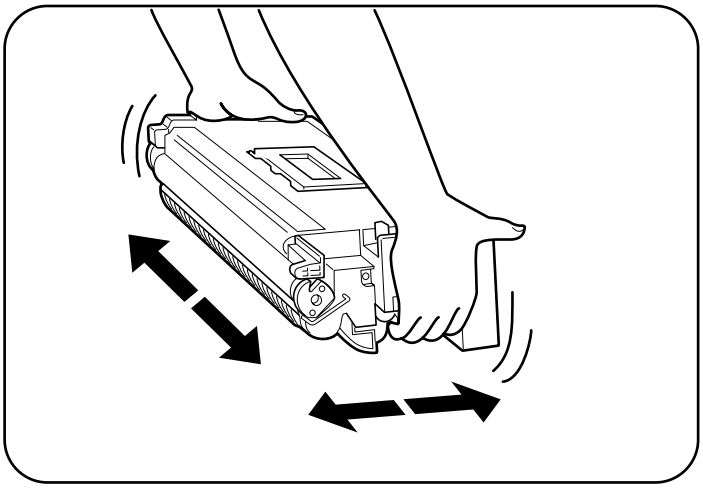
3. Remove the EP cartridge. Lift the orange handle on the cartridge to gently take it out. Then hold the handle and completely remove the cartridge. Be careful about the toner falling out, then wrap the used EP cartridge in its original packing and dispose it properly. Never dispose of it by burning.



4. Remove a new EP cartridge from the packing, and pull out the protective paper sheet from the drum shutter.

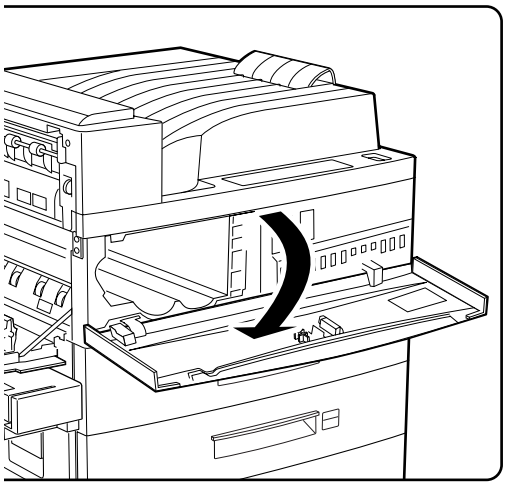


5. Hold the EP cartridge horizontally and gently shake it 5 to 6 times to evenly distribute the toner inside.

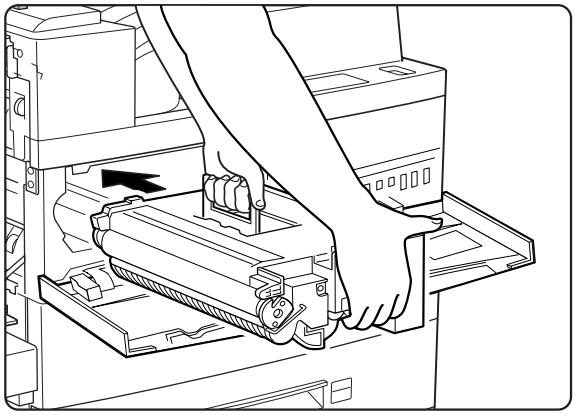


CAUTION: Uneven toner distribution may degrade print quality. If the toner has not been properly freed by shaking the cartridge, a noise may be heard when turning on the printer and the EP cartridge may be damaged.

6. Open the front cover as indicated.

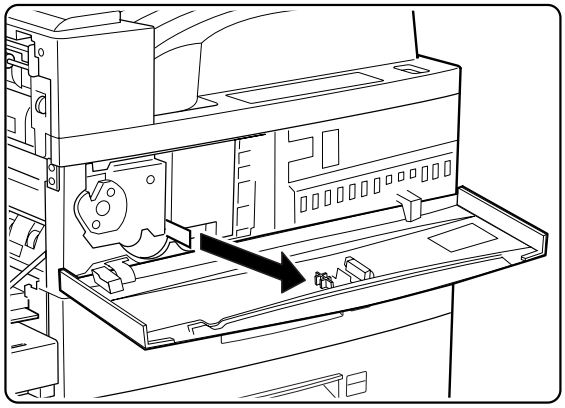


7. While holding the orange handle with one hand, gently push the cartridge all the way into the printer.



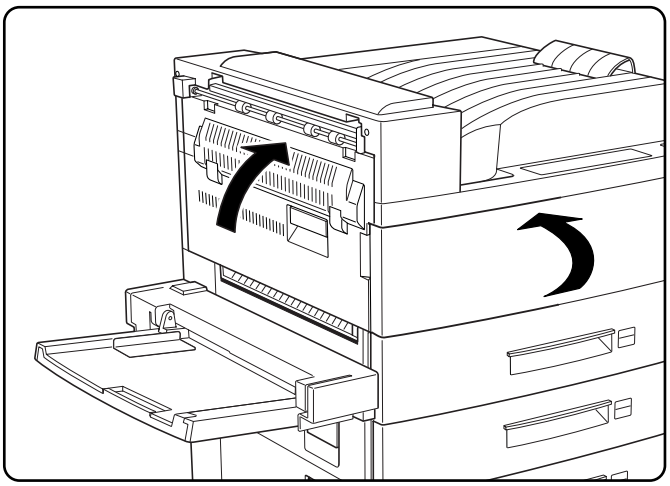
NOTE: Do not touch any parts inside the printer. Make sure the cartridge is seated properly.

8. Gently pull out the sealing tape in the direction of the arrow.



NOTE: If the tape is pulled out at an angle, it may break possibly rendering the cartridge unusable.

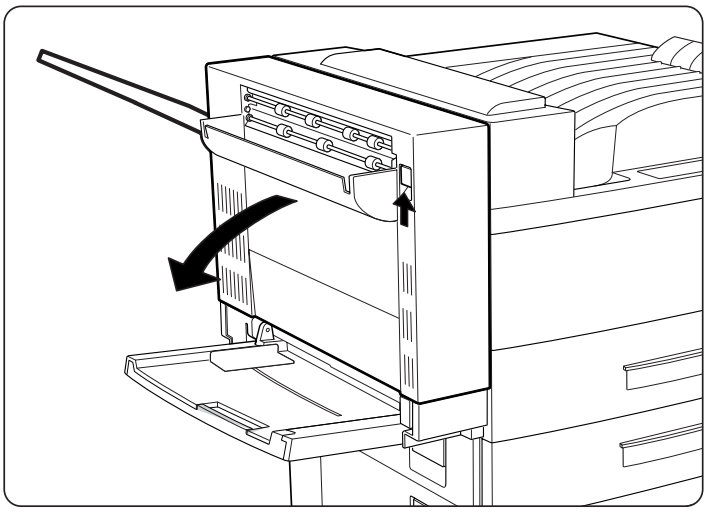
9. Close the front cover and the upper left cover.



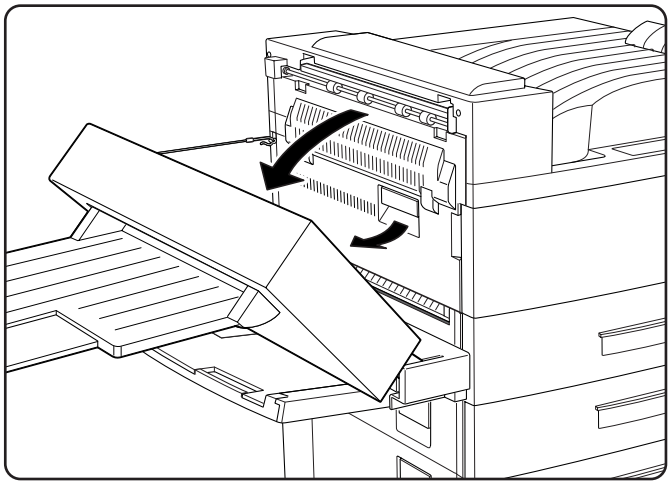
The upper left cover can be closed only when the EP cartridge is inside the printer. If you have not installed the EP cartridge, do not close the upper left cover by force. When closing the upper left cover, do not use the latch on the cover. Instead, follow the instruction label on the cover and push the recommended location.

Replacing the EP cartridge (when options are installed)

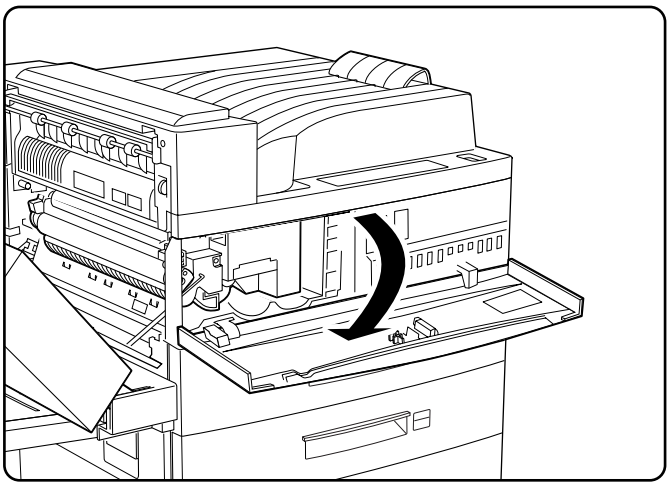
1. If the duplex printing unit is installed, pull on its latch to open it.



2. Hold the latch and open the upper left cover.

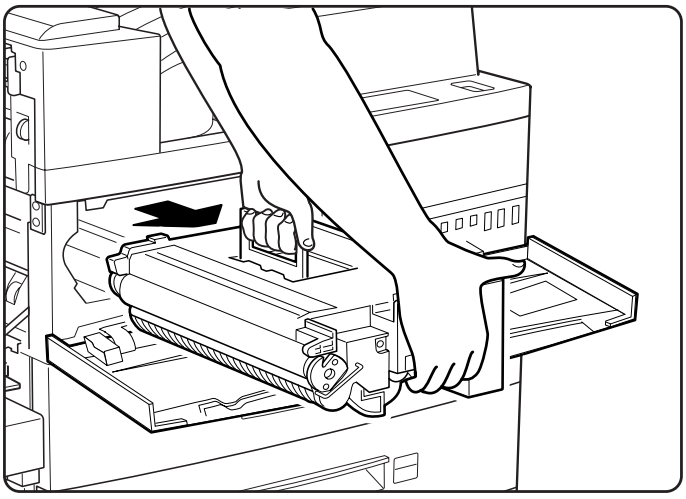


3. Open the front cover as indicated.

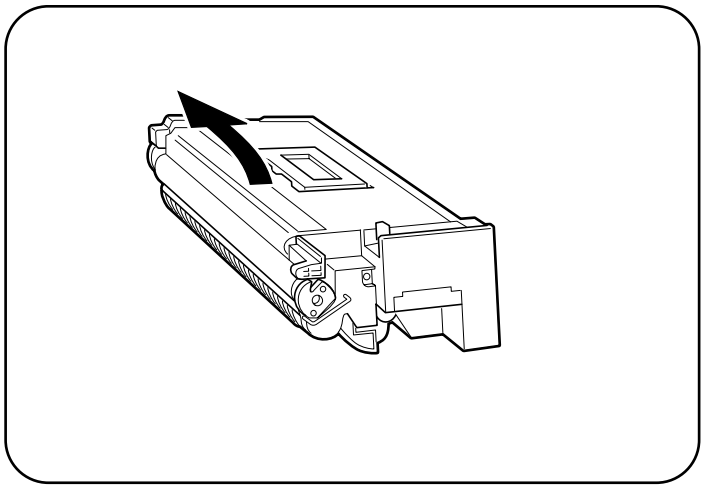


Never touch the fuser area where a label indicating high temperature is located (such as that shown below), or else burns may result.

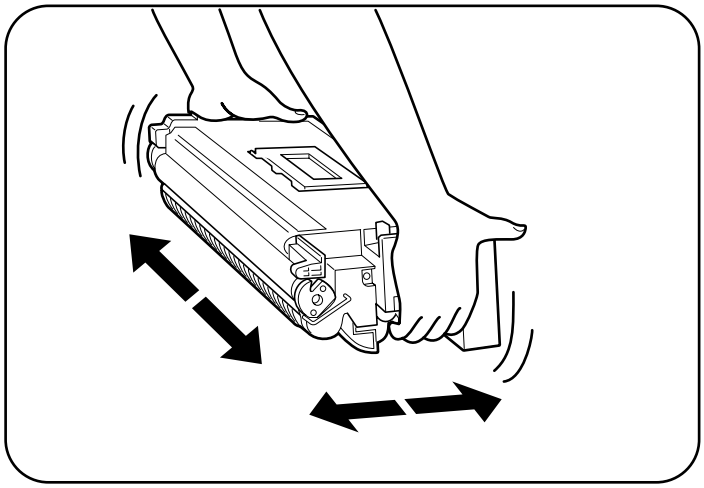
4. Remove the EP cartridge. Lift the orange handle lever on the cartridge to gently take it out. Then hold the handle and completely remove the cartridge. Be careful about the toner falling out, then wrap the used EP cartridge in its original packing and dispose it properly. Never dispose of it by burning.



5. Remove a new EP cartridge from the packing, and carefully pull out the protective paper sheet from the drum shutter.

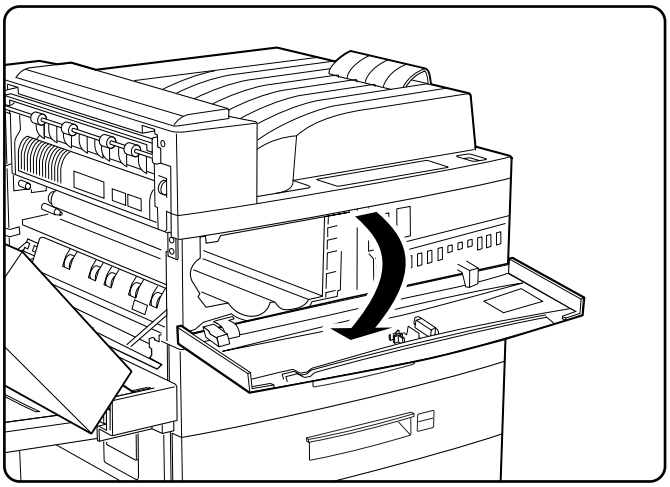


6. Hold the EP cartridge horizontally and gently shake it 5 to 6 times to evenly distribute the toner inside.



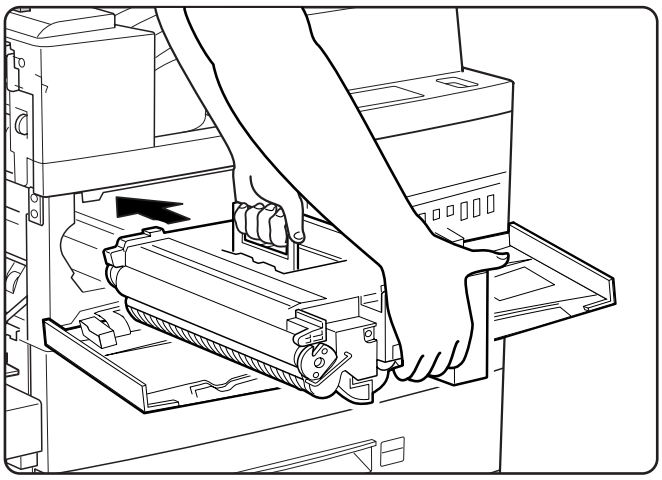
CAUTION: Uneven toner distribution may degrade print quality. If the toner has not been properly freed by shaking the cartridge, a noise may be heard when turning on the printer and the EP cartridge may be damaged.

7. Open the front cover as indicated.



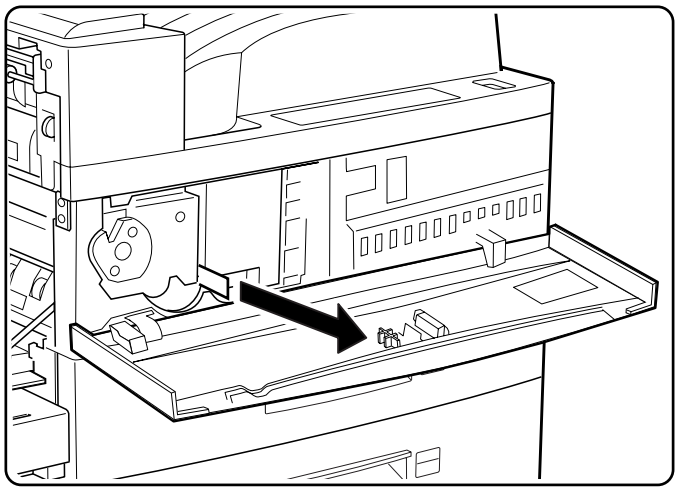
WARNING: Never touch the fuser area where a label indicating high temperature is located (such as that shown below), or else burns may result

8. While holding the orange handle with one hand, gently push the cartridge all the way into the printer.



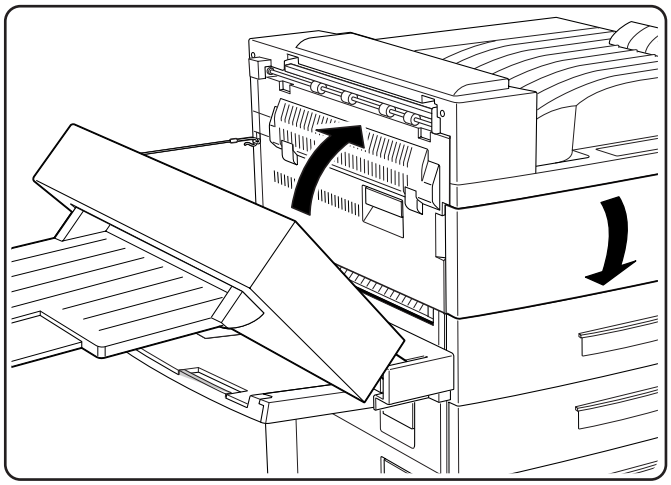
NOTE: Do not touch any parts inside the printer. Make sure the cartridge is seated properly.

9. Gently pull out the sealing tape in the direction of the arrow.



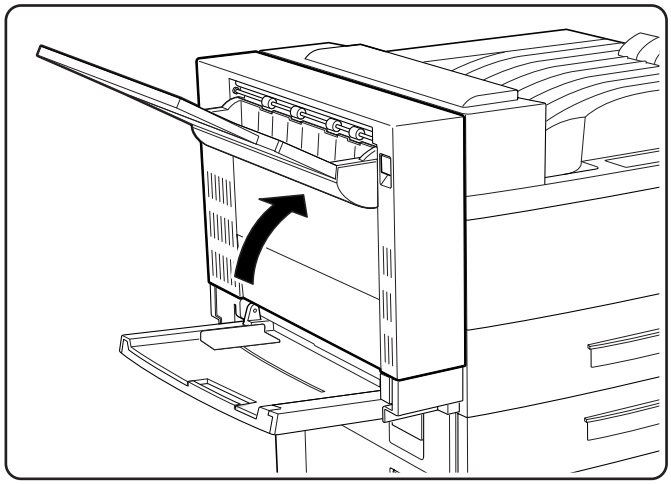
NOTE: If the tape is pulled out at an angle, it may break possibly rendering the cartridge unusable.

10. Close the front cover and the upper left cover.



NOTE: The upper left cover can be closed only when the EP cartridge is inside the printer. If you have not installed the EP cartridge, do not close the upper left cover by force. When closing the upper left cover, do not use the latch on the cover. Instead, follow the instruction label on the cover and push the recommended location.

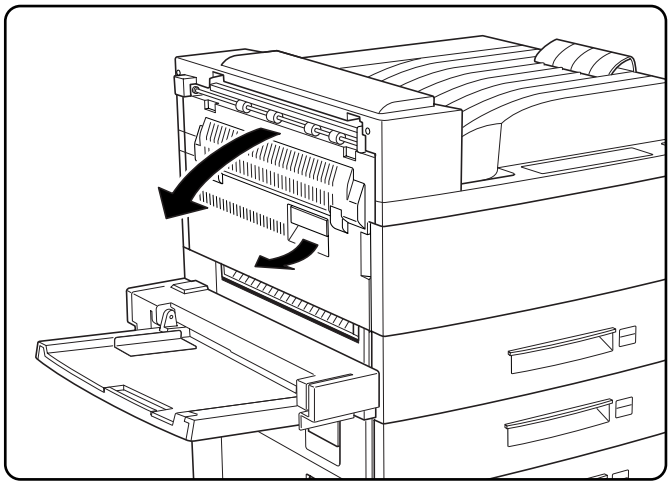
11. Close the duplex printing unit.



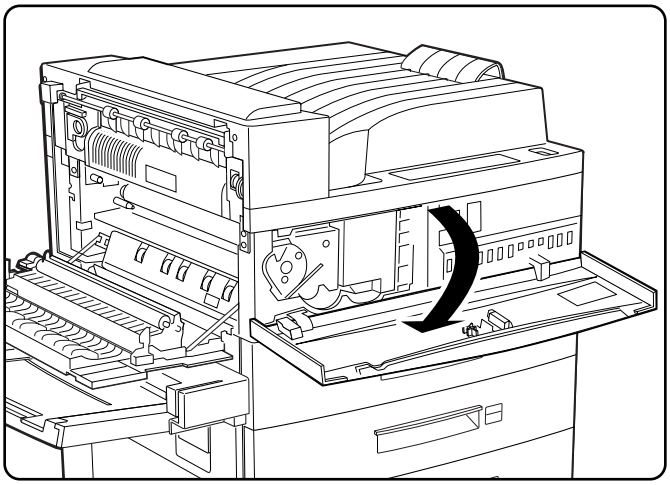
Replacing the Fuser

The fuser becomes very hot during operation. Never touch the fuser area where a label indicating high temperature is located (such as that shown below), or else burns may result. Before replacing the fuser, turn the printer off and wait at least 40 minutes before replacing it.

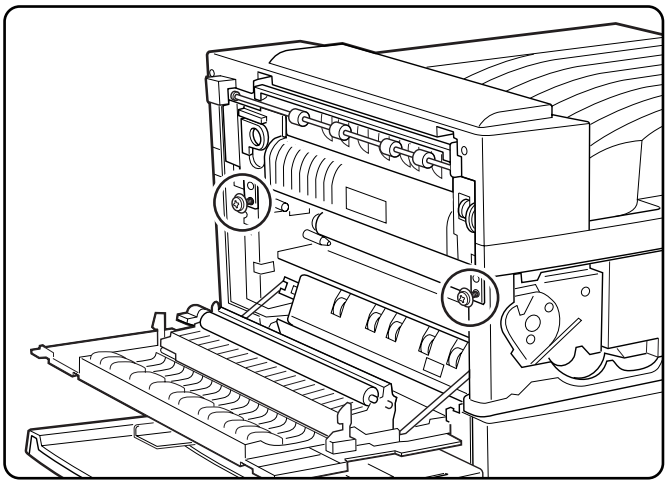
1. Open the upper left cover.



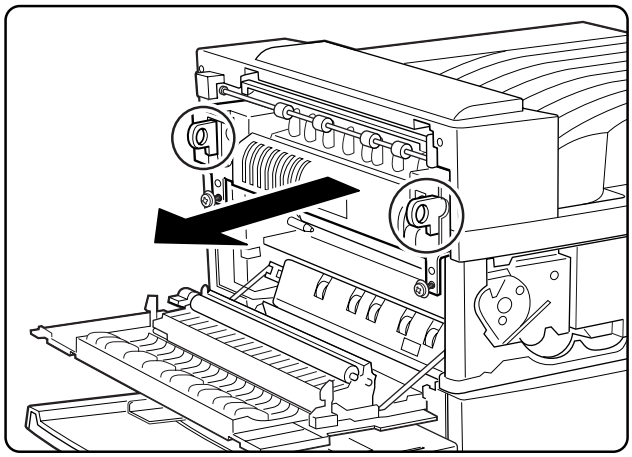
2. Open the front cover.



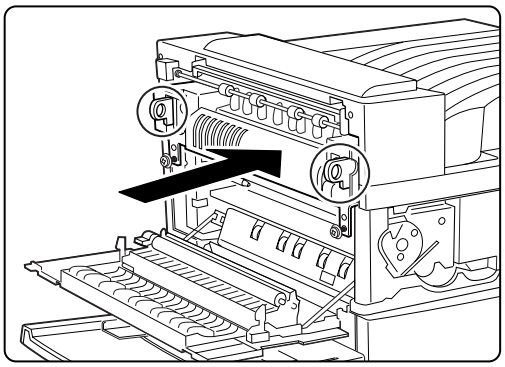
3. Loosen the two locking screws indicated. (You cannot remove them completely.)



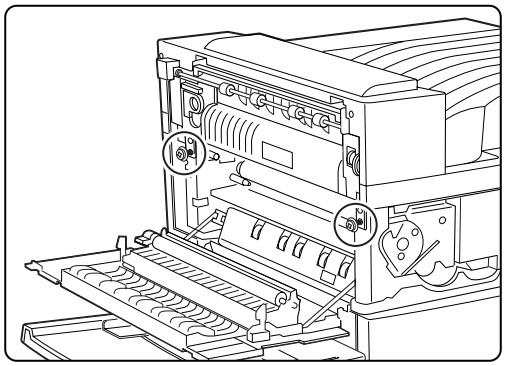
4. Hold the two rings indicated and pull out the fuser. Dispose of the fuser



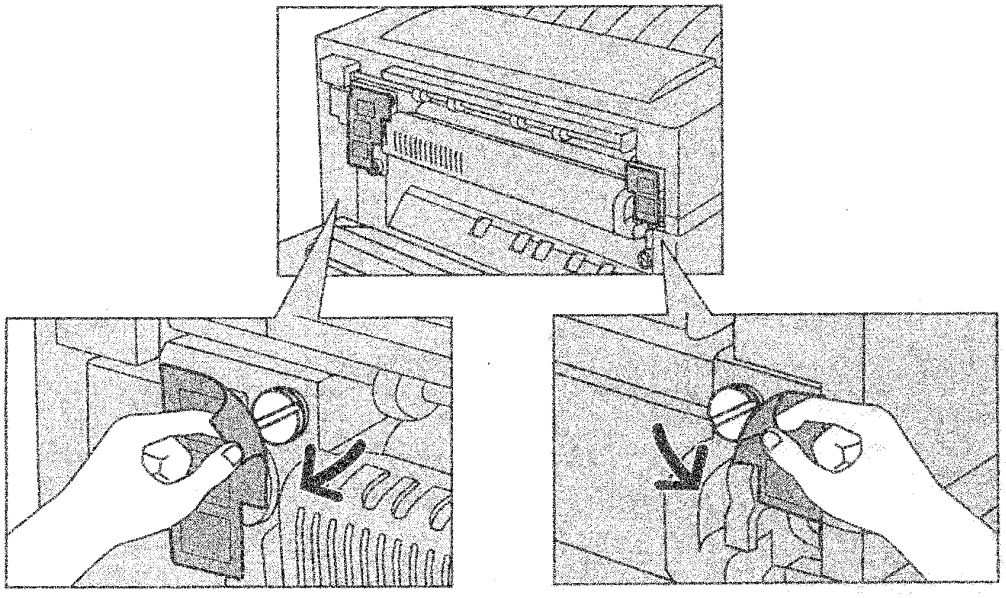
5. Prepare a new fuser. While holding the two rings of the new fuser, push into the printer as indicated.



6. Tighten the two locking screws.

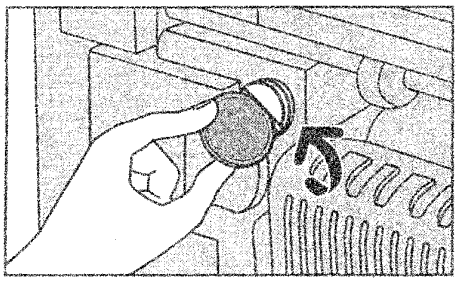


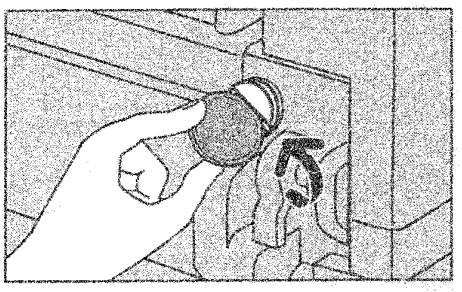
7. Remove and discard the protective covers to expose the two metal fuser shipping screws



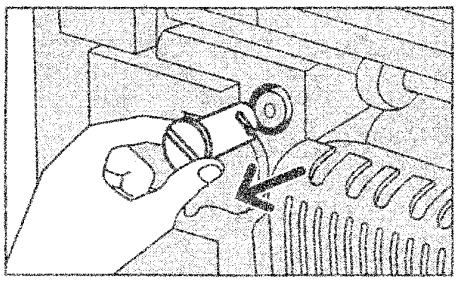
The two metal fuser shipping screws MUST be removed and discarded. They are intended to protect the fuser assembly during shipment. Failure to remove them will result in inferior fusing of toner and possible damage to the toner assembly.

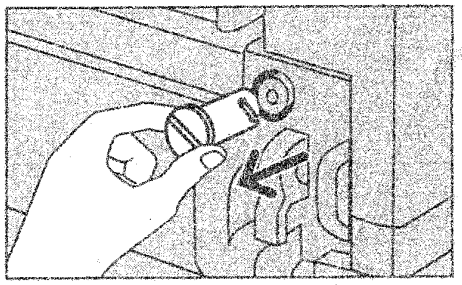
8. Using a coin or a flat head screwdriver with a wide blade, turning in a counter-clockwise direction, loosen the two metal fuser shipping screws.



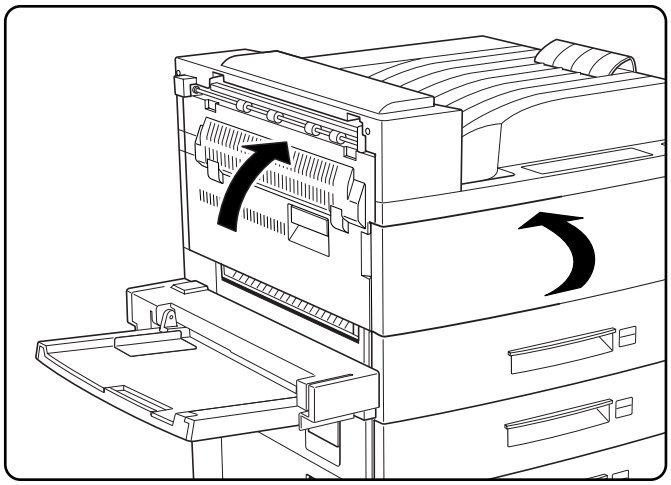


9. Completely remove and discard the two metal fuser shipping screws





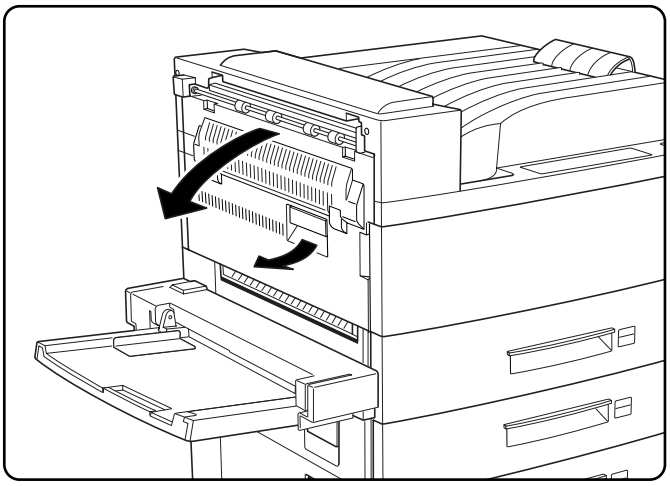
10. Close the front cover and then the upper left cover.



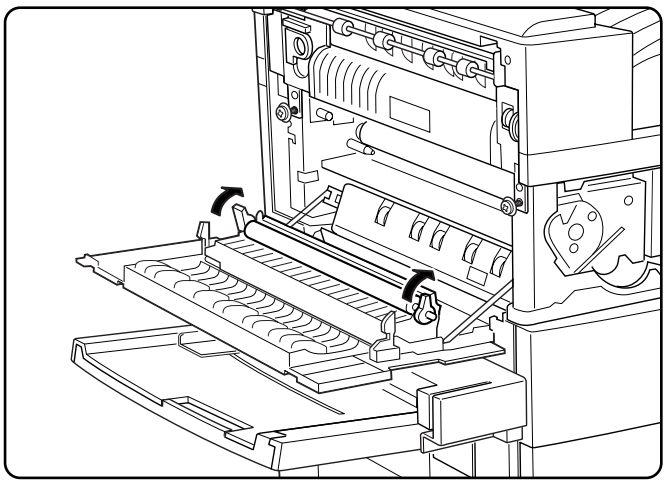
Replacing the Transfer Roller

Never touch the fuser area where a label indicating high temperature is located (such as that shown below), or else burns may result.

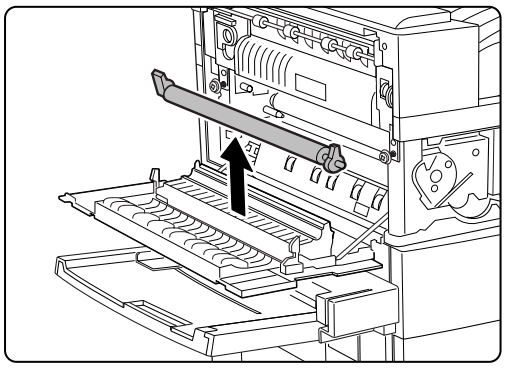
1. Open the upper left cover.



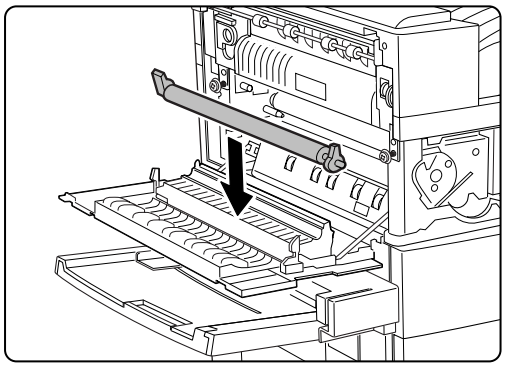
2. Lift up the handles to unlock the transfer roller.



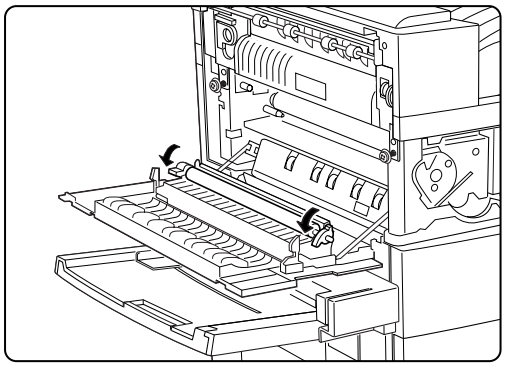
3. Remove the transfer roller.



4. Insert a new transfer roller and press down to hold the roller in place.



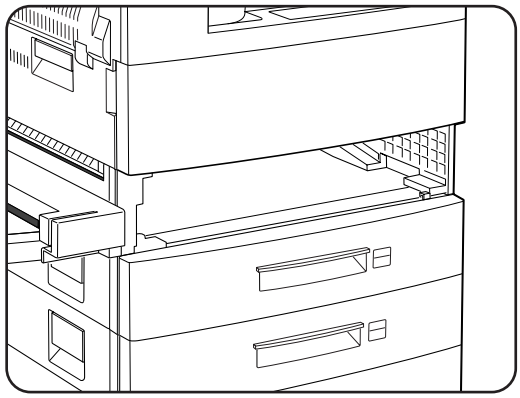
5. Push the handles to lock the transfer roller in place.



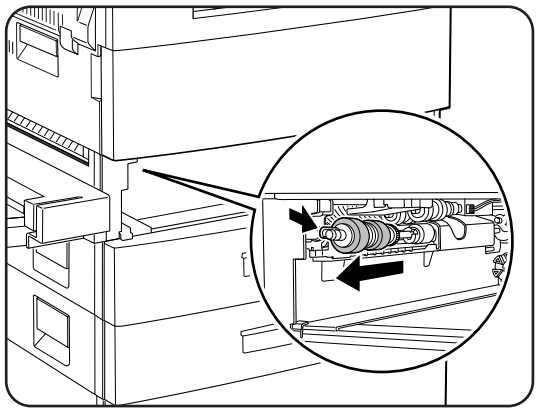
Replacing the Feed Rollers

After replacing the fuser, be sure to also replace the feed rollers.

1. Remove the top cassette from the printer unit.

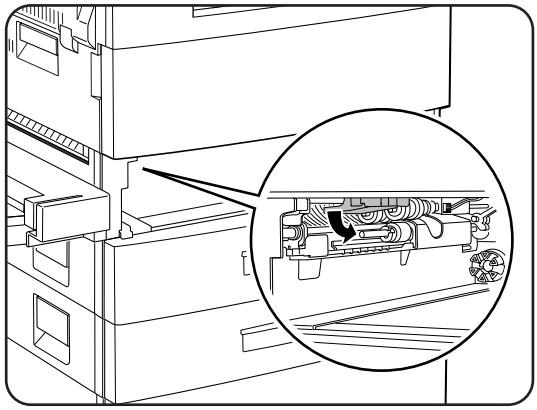


2. While pressing the white tab, remove the lower feed roller.

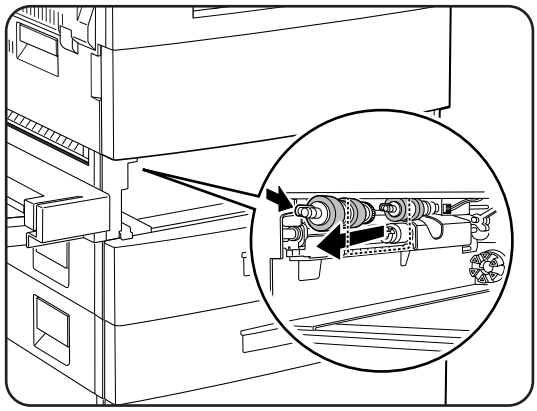


NOTE: Be sure not to remove the coupling behind the feed roller.

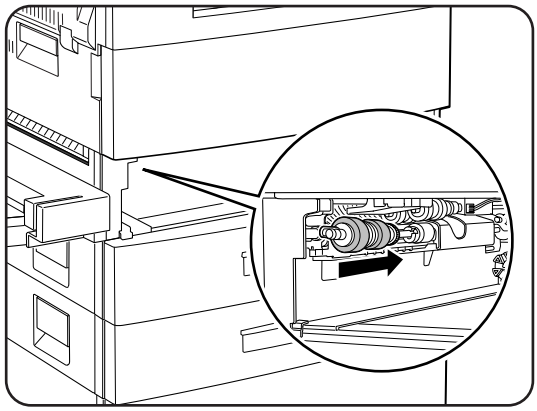
3. Flip down the cover and remove the upper two rollers with the same steps described earlier.



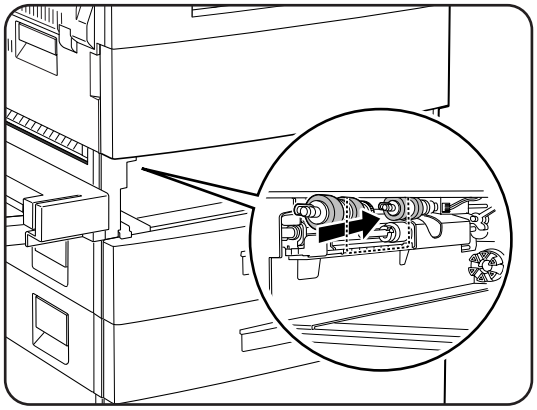
4. While pressing the white tab, remove the upper two rollers.



5. Insert a new upper feed rollers.

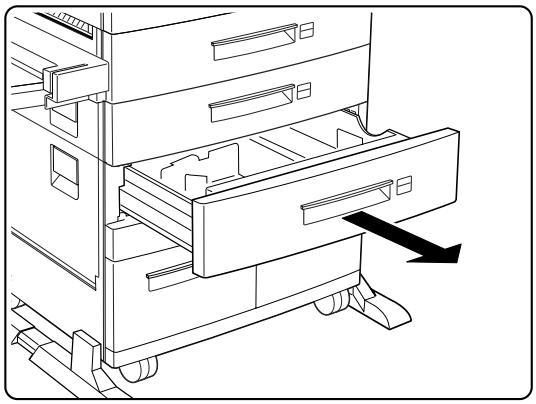


6. Inset a new lower feed roller.

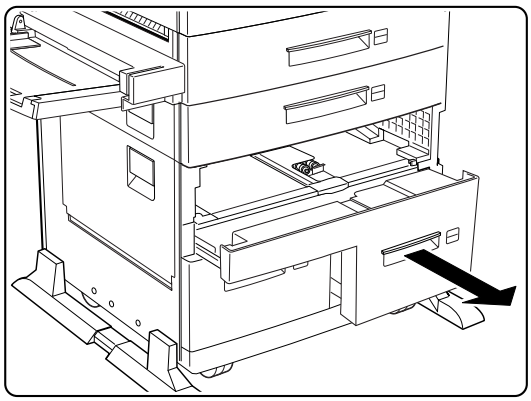


Tray 5 (HCF Unit)

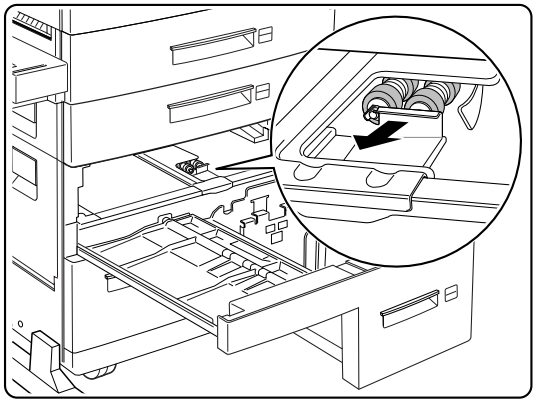
1. Remove the Tray 3.



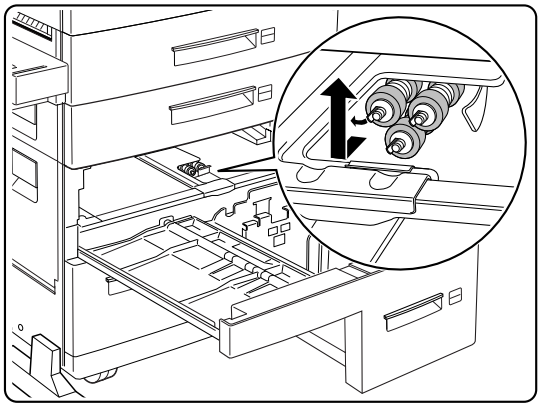
2. Pull out the Tray 5.



3. Pull the roller cover towards you.

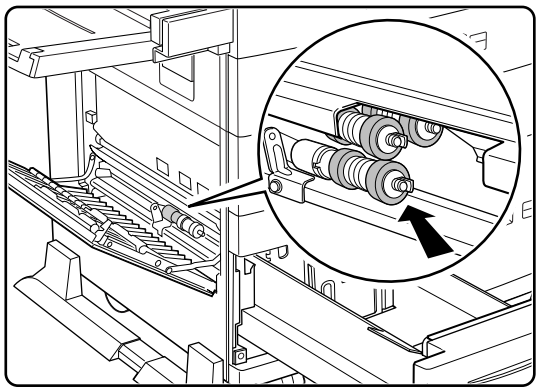


4. While pressing the white tab, remove the three feed rollers



NOTE: Be sure not to remove the coupling behind the feed roller.

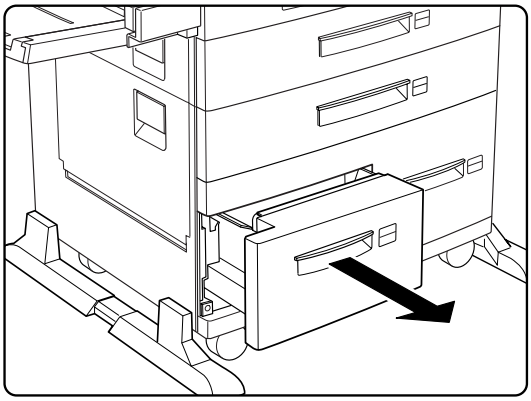
5. Insert the three new feed rollers.



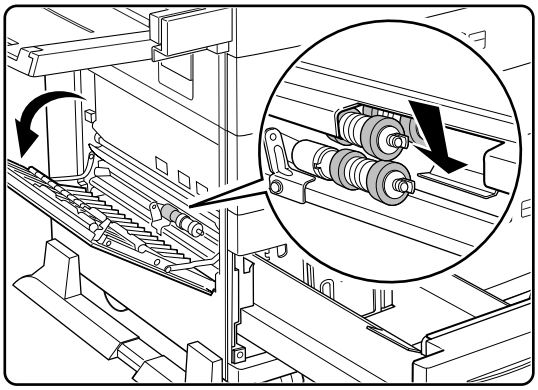
6. Push back the Tray 5.
7. Re-insert the Tray 3.

Tray 4 (HCF Unit)

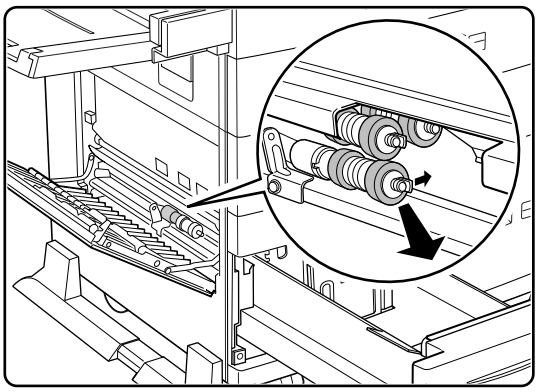
1. Pull out the left tray.



2. Open the lower left cover. Press down the roller cover.

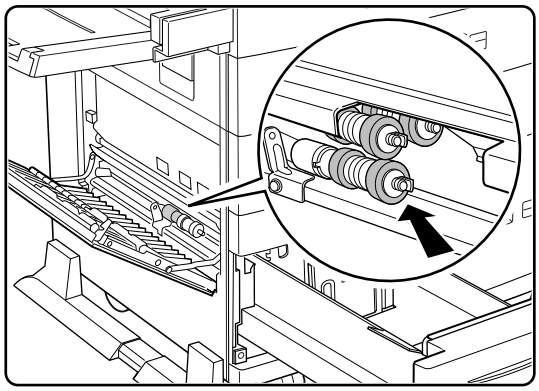


3. While pressing the white tab, remove the three feed rollers.



NOTE: Be sure not to remove the coupling behind the feed roller.

4. Insert three new feed rollers.



5. Push back Tray 4.

Cleaning

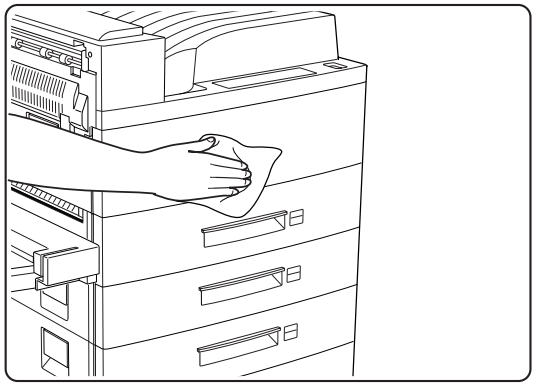
In order to keep your printer in optimum working condition, clean the exterior and interior of the printer as described below.

WARNING: Before cleaning the printer or performing any other maintenance tasks, be sure to turn off the printer and disconnect the power cord from the AC outlet. Not doing so may cause a risk of electric shock.

CAUTION: Use only water or mild detergent. To prevent the possibility of discoloration, cracking, and deformation of the printer housing, do not use cleaning alcohol or other volatile substances,.

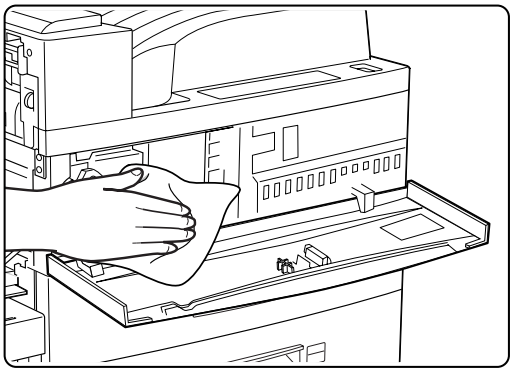
Clean the exterior of the printer

Clean the exterior of the printer about once a month. Use a soft cloth slightly moistened with water. For stubborn stains, soak the cloth in a mild detergent solution before cleaning. Finish by wiping the printer with a soft, dry cloth.



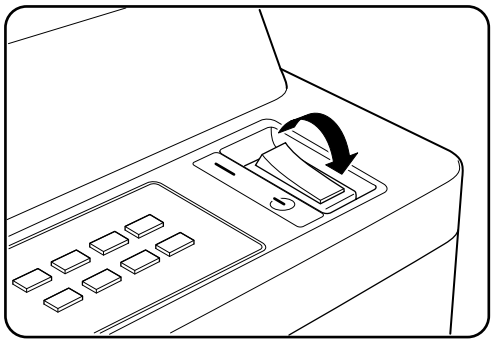
Check the interior of the printer

After removing a paper jam or replacing the EP cartridge, check the inside of the printer. Remove any paper scraps and wipe off paper dust with a dry, clean lint-free cloth.



Daily Maintenance

At the end of the day, turn off the printer by setting the power switch to [0]. If any error message or status code appears, see "Chapter 6 Troubleshooting"and turn off the printer properly.



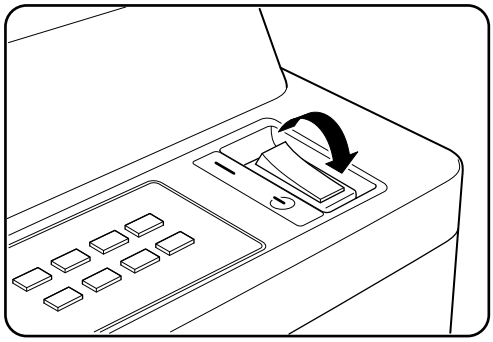
Preparing the Printer for a Period of Extended Non-Use

If the printer will not be used for one week or more, perform the following steps.

WARNING: Never touch the power cord or the plug with wet hands; otherwise electric shock may result.

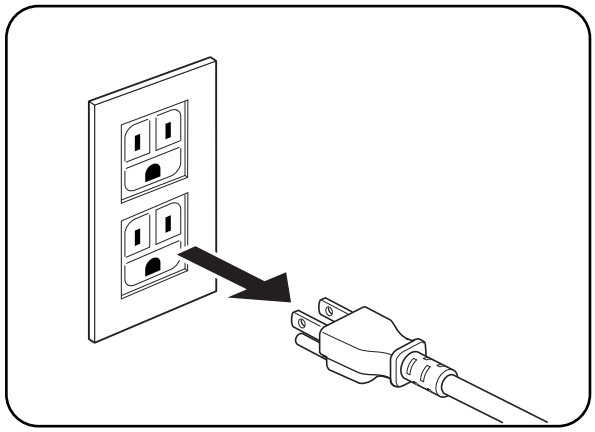
WARNING: Always remove the power cord by pulling on the plug but not the cord; otherwise the power cord may be damaged and fire or electric shock may result.

1. Turn off the printer by setting the power switch to the [0] position.

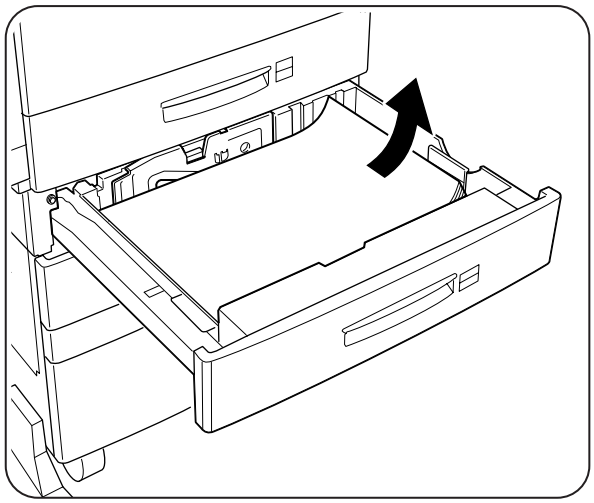


If any error message or status code appears, see "Chapter 6 Troubleshooting" and turn off the printer properly.

2. Unplug the power cord from the AC outlet.



3. Remove any paper from the multi bypass feeder as well as all the paper cassettes. Store the paper in a location that is not humid and dusty. For more information, see "Appendix B Safety Notes and Regulatory Compliances".



Relocating the Printer

To move the printer, follow the steps below.

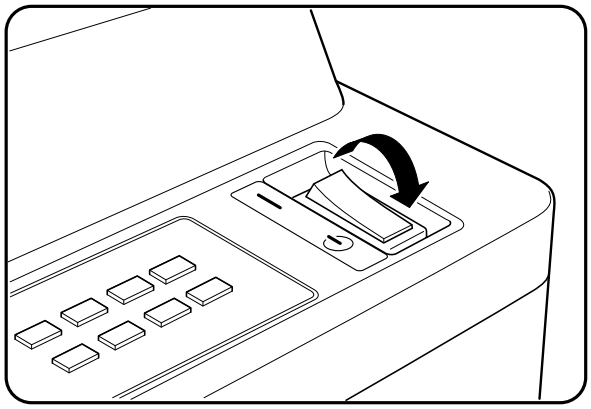
WARNING: This printer is very heavy. The weight of the main unit without paper cassette, consumables, and paper is about 106 lbs. Never attempt to lift the printer by yourself. The printer should always carried by two persons.
To carry the printer, grasp the four bottom corners from the right and left sides, not from the front (where the control panel is located) and back sides. Never try to lift the printer while holding any part other than the bottom corners. Otherwise there will be a severe risk of injury if the printer is dropped.
When lifting the printer, correct posture is important to prevent hip injuries.

WARNING: Never touch the power cord or the plug with wet hands; otherwise electric shock may result.

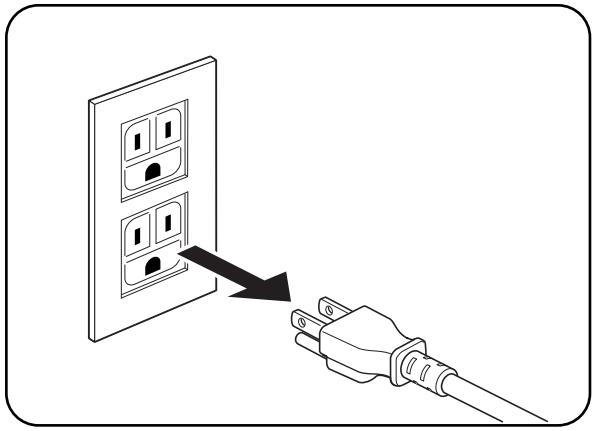
WARNING: Always remove the power cord by pulling on the plug but not the cord; otherwise the power cord may be damaged and fire or electric shock may result.

NOTE: Remove any options such as the duplex printing unit before moving the printer. For instructions on how to remove the options, see the appropriate section. To transport the printer over long distance, put the printer in its original shipping carton and other packing materials.

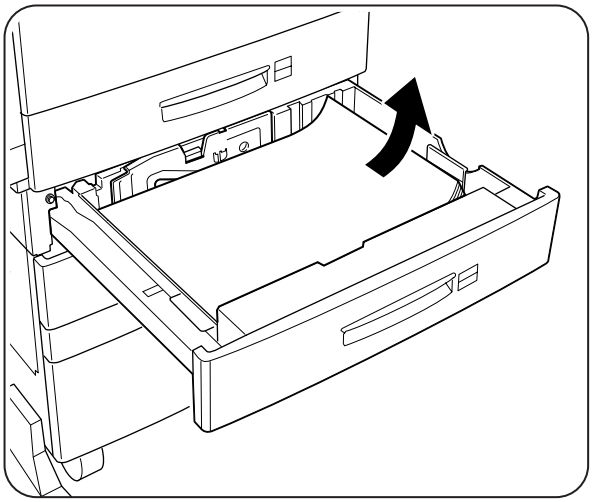
1. Turn off the printer by setting the power switch to the [0] position.
   If any error message or status code appears, see "Chapter 6 Troubleshooting"and turn off the printer properly.



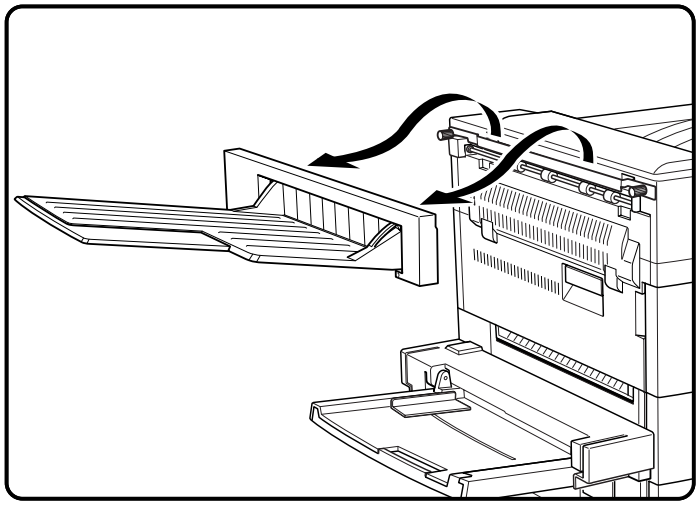
2. Unplug the power cord from the AC outlet and the printer.



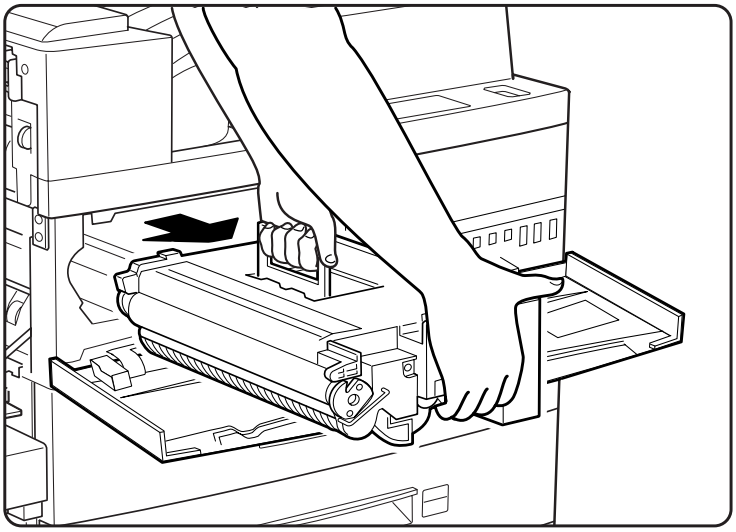
3. Remove any paper from the multi bypass feeder as well as all the paper cassettes.Store the paper in a location that is not humid and dusty. For more information, see "Appendix B Safety Notes and Regulatory Compliances".



4. If the optional face-up tray is installed, remove it.

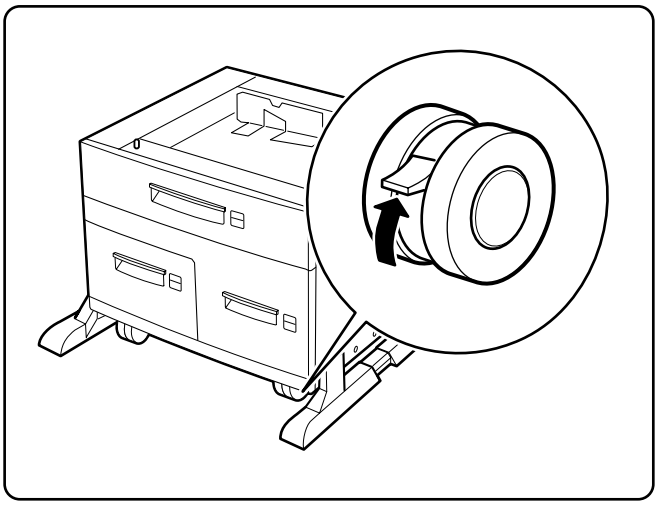


5. Remove the EP cartridge inside the printer. If the printer is moved with the cartridge inside, toner may spill out and soil the printer.



NOTE: Replace the EP cartridge in its original packing material, or wrap it in a thick lint-free cloth.

6. If the HCF unit is installed, unlock the stoppers on its casters.



7. Move the printer to a new location and reverse the steps above.

◆ ◆ ◆

Chapter 6

Troubleshooting

In this Chapter . . .

- "About this Chapter" on page 6-2
- "Solving Printer Power-on Problems" on page 6-2
- "Solving Print Quality Problems" on page 6-3
- "Clearing Paper Jams" on page 6-6
- "Control Panel LCD Messages" on page 6-17
- "Ethernet Network Interface Troubleshooting" on page 6-29

About this Chapter

Explains procedures to isolate and solve problems that may occur during use of your printer. Clearing paper jams and detailed troubleshooting of LCD error messages are discussed in this chapter. Troubleshooting the Ethernet network interface is also discussed in this chapter.

Solving Printer Power-on Problems

This section describes problems that can occur when starting up the printer. If the trouble persists after performing the checks listed below, turn the printer off [O], disconnect the power cord from the AC outlet. .

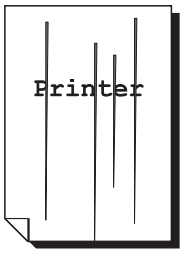
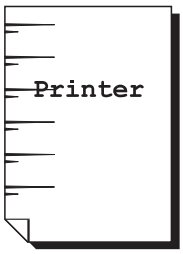
CAUTION: To prevent the risk of fire or smoke generation, do not attempt to modify the printer in any way.

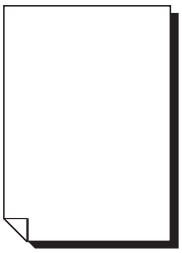
WARNING: Before cleaning the printer or performing any other maintenance, be sure to turn the printer off [O], and disconnect the power cord from the AC outlet to prevent the risk of electric shock.

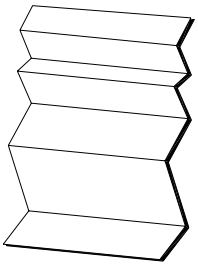
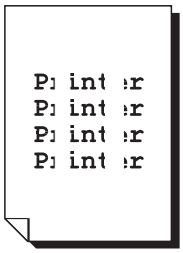
DESCRIPTION	POSSIBLE CAUSE	REQUIRED ACTION
No power.	Power switch not turned on. Switch not set to [I].	Check power switch. See "Chapter 1 Unpacking and Installing Your Printer" for Printer" for more information
	Power cord not properly plugged into AC outlet or AC connector on rear of printer	Set power switch to [O] (off) and plug in power cord firmly. See "Chapter 1 Unpacking and Installing Your Printer" for more information.
	Voltage of AC power line not correct.	Verify that AC outlet is rated for the correct voltage and amperage of your printer. See "Chapter 1 Unpacking and Installing Your Printer" for more information.
Power is frequently interrupted	Printer is defective	Turn printer off [O], disconnect power cord from the AC outlet. Call technical support for a service or repair call.

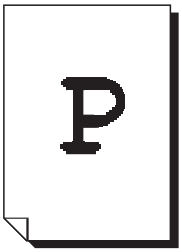
Solving Print Quality Problems

This section describes quality problems during printing. Go through the list below to find the conditon that most closely resembles the problem and follow the recommended action. If the trouble persists after performing the checks listed below, turn the printer off [O], disconnect the power cord from the AC outlet. Call technical support or service technician.

DESCRIPTION	POSSIBLE CAUSE	REQUIRED ACTION
Faded print	Print media is moist.	Remove moist media and load new dry media.
	EP cartridge is old or damaged	Replace EP cartridge. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	Toner in EP cartridge is low.	
Black dots	Print media is outside recommended specification.	Use recommended print media. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	EP catridge is old or damaged.	Replace EP cartridge.See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
Vertical black streaks 	EP catridge is old or damaged.	Replace EP cartridge. See See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
Repetitive defects. 	Paper path is dirty.	Print out several blank sheets
	EP cartridge is old or damaged.	Replace EP cartridge. SeeSee "Chapter 5 Printer Consumables, Cleaning and Maintenance" .

DESCRIPTION	POSSIBLE CAUSE	REQUIRED ACTION
Character voids	Print media is outside recommended specifications	Use recommended print media. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	EP cartridge is old or damged.	Replace EP cartridge. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
Toner smears when rubbed	Print media is moist	Remove moist media and load new dry media. See See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	Print media is outside recommended specifications	Use recommended print media. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
Black page	EP cartridge is old or damaged.	Replace EP cartridge. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	High-voltage power supply may be defective	Contact Compuprint to arrange for a technical support or service or repair call.
Blank page 	Sealing tape of EP cartridge not pulled out.	Pull out sealing tape. SeeSee "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	Printer feeds two or more sheets at a time	Avoice adding paper to a nearly full stack. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	EP cartridge is old or damaged.	Replace EP cartridge. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	Toner in EP cartridge is low.	
	High-voltage power supply may be defective	Contact Compuprint to arrange for a technical support or service or repair call.

DESCRIPTION	POSSIBLE CAUSE	REQUIRED ACTION
Partial blanks	Print media is moist	Remove moist media and load new dry media. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	Print media is outside recommended specifications	Use recommended print media. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	Sealing tape of EP cartridge not pulled out.	Replace EP cartridge. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
Creased paper 	Print media is outside recommended specifications	Use recommended print media. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	Print media is moist	Remove moist media and load new dry media. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
Plotted print	Print media is outside recommended specifications	Use recommended print media. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	Print media is moist	Remove moist media and load new dry media. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
Vertical blanks 	EP cartridge is not installed correctly.	Remove EP cartridge and reinstall it. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	EP cartridge is old or damaged.	Replace EP cartridge. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .

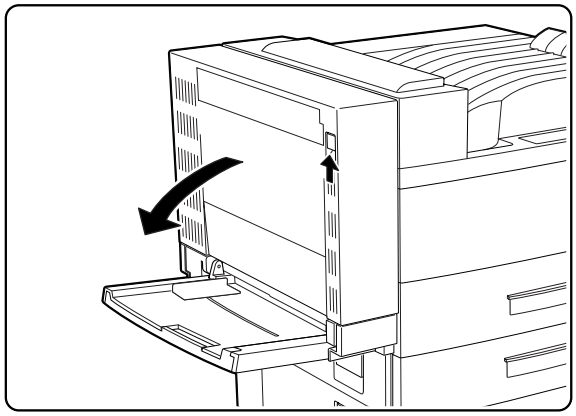
DESCRIPTION	POSSIBLE CAUSE	REQUIRED ACTION
Blurred print	Print density setting is not appropriate	Adjust print density. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	EP cartridge is old or damaged.	Replace EP cartridge. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
Bold print appears shaded 	Print density setting is not appropriate	Adjust print density. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .
	EP cartridge is old or damaged.	Replace EP cartridge. See "Chapter 5 Printer Consumables, Cleaning and Maintenance" .

Clearing Paper Jams

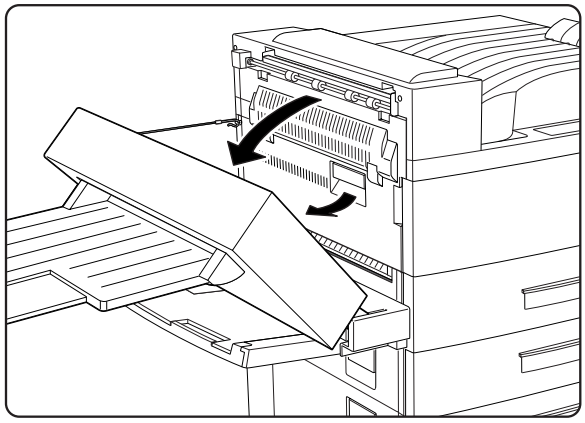
This section provide information for removing paper jams from paper path areas of your printer and paper handling options.

Clearing Paper Jams from Area A

1. If the duplexer is installed, pull on the latch indicated to open the unit

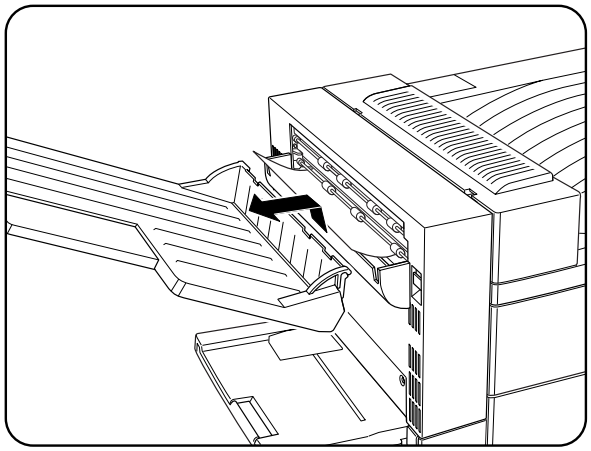


2. Pull on the latch to open the upper left cover.

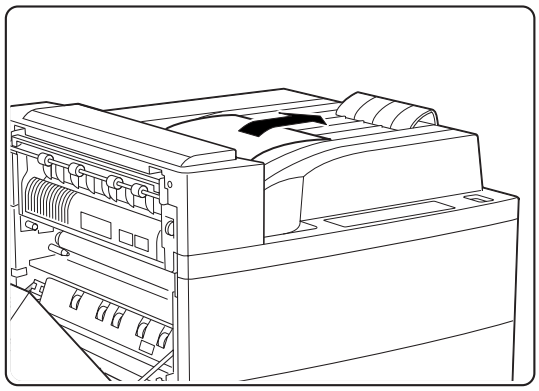


If the optional face up tray is installed instead of the duplexer, lift to unhook and remove the face up tray.

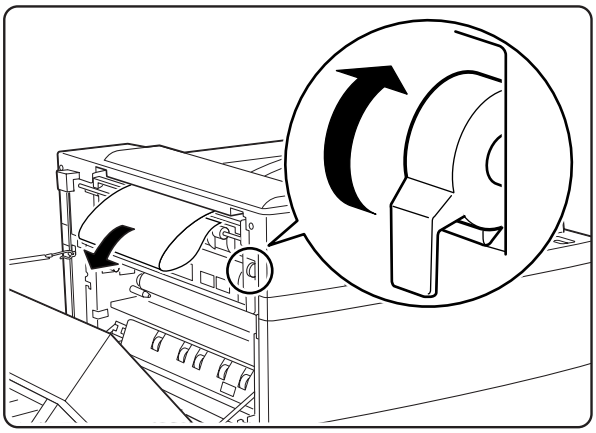
3. Remove any paper jam found.



If the leading edge of the paper is already in the paper output tray, pull out the paper in the direction of the arrow.

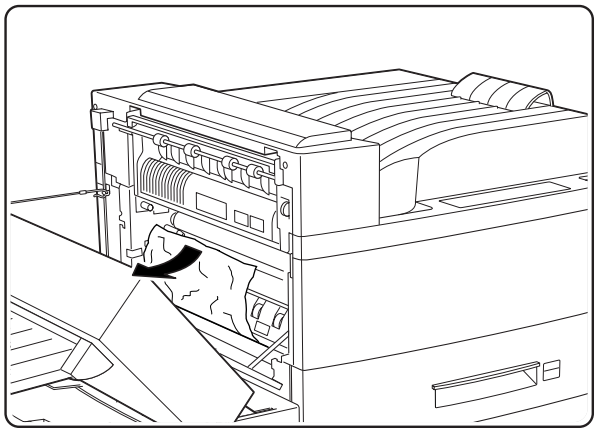


If the paper is jammed at the fuser area, pull it out carefully without touching the fuser If it becomes difficult to pull out the paper, turn the knob continuously in the direction of the arrow until the paper is adequately out and easy to pull..

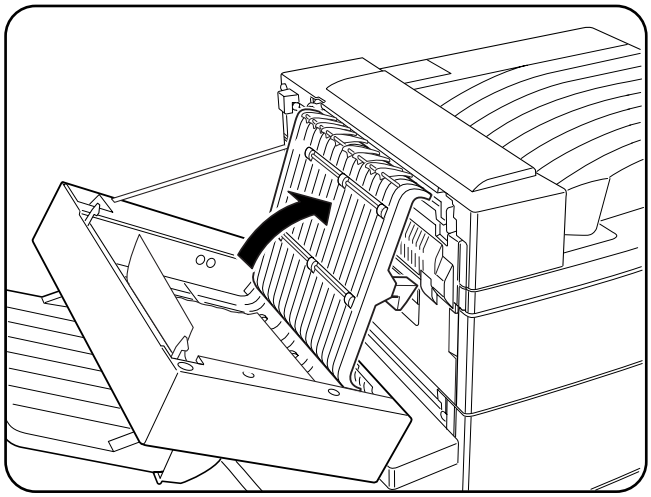


WARNING: Never touch the fuser area where a label indicating high temperature is located (such as that shown below), or else burns may result.

If the paper is jammed at the indicated location, pull it out in the direction of the arrow.

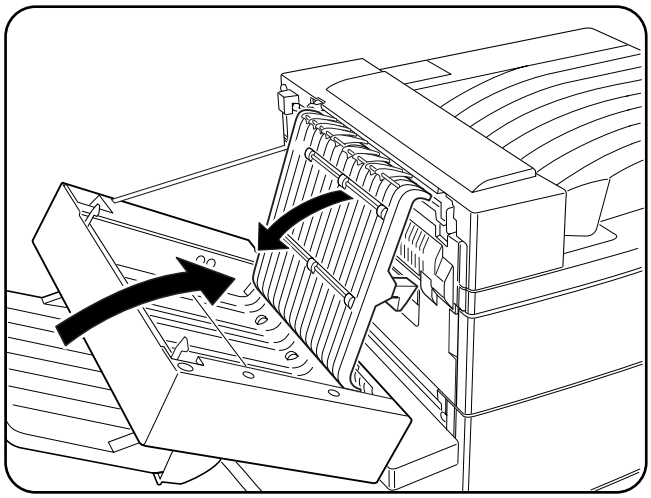


4. Open the cover inside the duplexer.



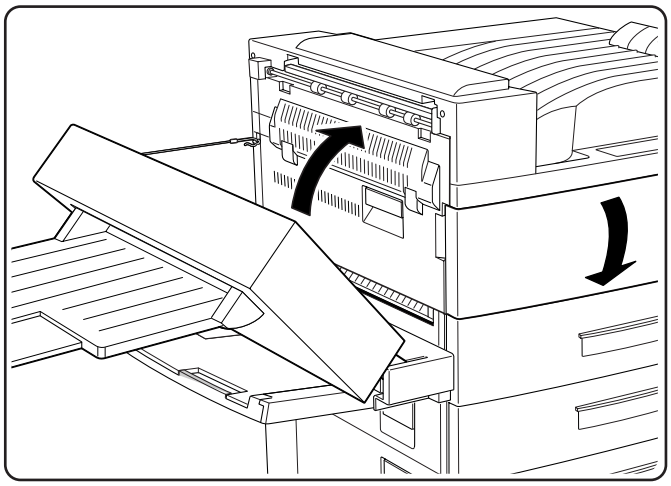
5. Remove any paper jam found by pulling out the paper in the direction of the arrow as shown.

6. Close the cover inside the duplexer

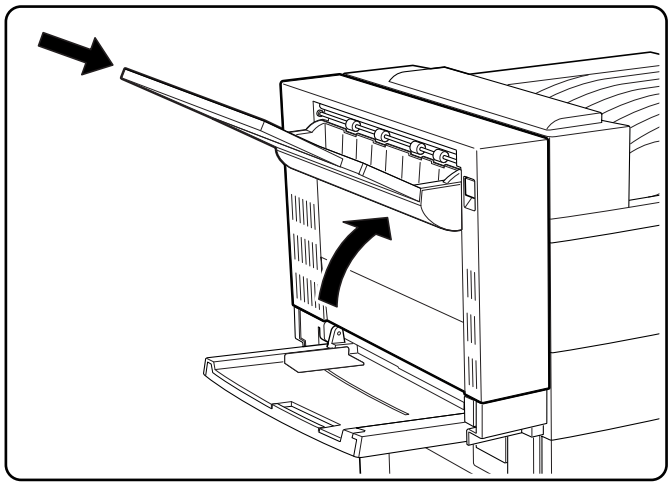


7. Close the duplexer.

NOTE: When closing the duplexer, do not use the latch on the cover. Instead, follow the instruction label on the cover and push the recommended location.

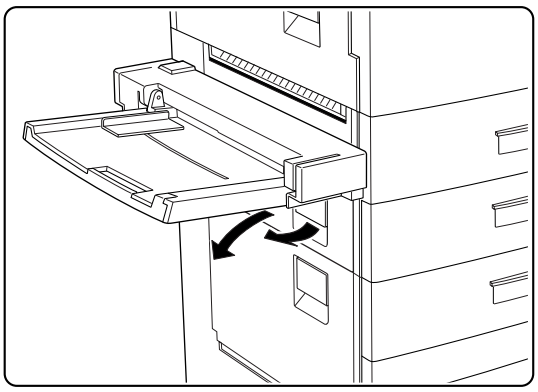


8. Close the duplexer or reinsert the face-up tray as appropriate.

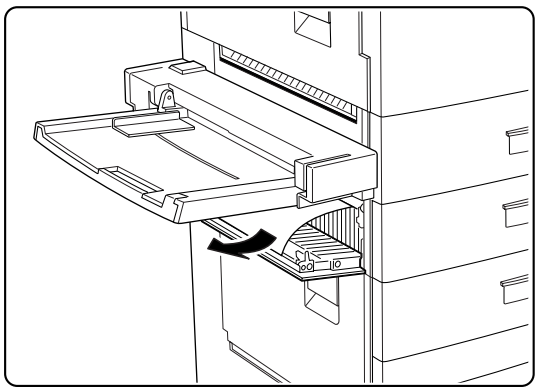


Clearing Paper Jams from Area B

1. Pull on the latch to open the cover to Area B



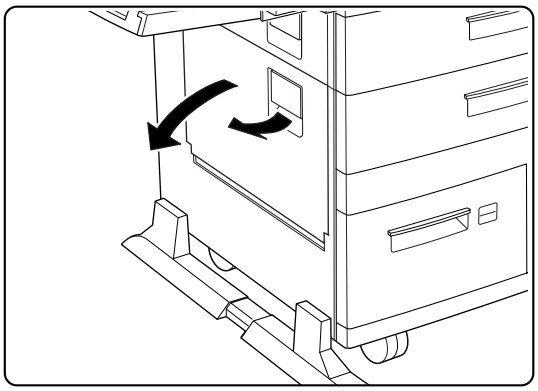
2. Remove any paper jam found



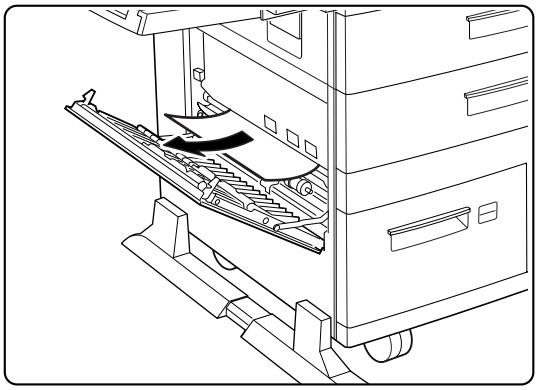
3. If the paper is jammed at Area B, pull it out in the direction of the arrow as shown. If no paper jam is found consult the LCD display of the control panel for information about a possible jam in a paper tray.

Clearing Paper Jams from Area C

1. Pull on the latch to open the cover to Area B



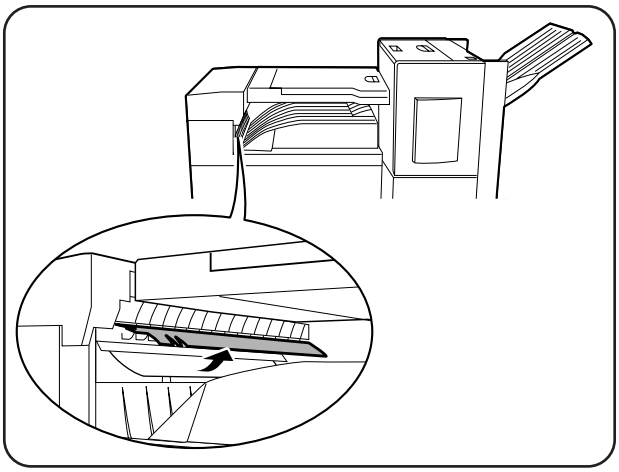
2. Remove any paper jam found



3. If the paper is jammed at Area B, pull it out in the direction of the arrow as shown. If no paper jam is found consult the LCD display of the control panel for information about a possible jam in a paper tray.

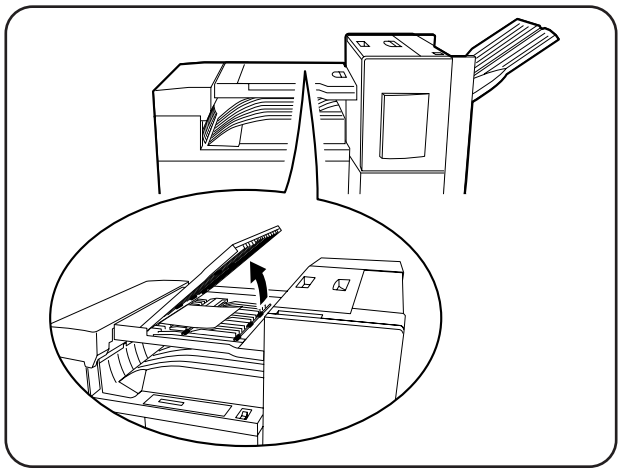
Clearing Paper Jams from Area E

Lift the handle of the Stapler/Stacker docking cover and remove any jammed paper found.



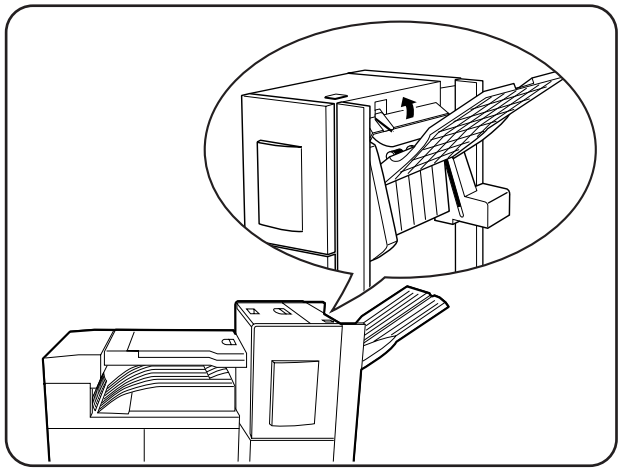
Clearing Paper Jams from Area F

Open the cover of the Stacker/Stapler's paper horizontal transport and remove any jammed paper found.



Clearing Paper Jams from Area H

Remove any jammed paper found.



Clearing Paper Jams from Tray 1

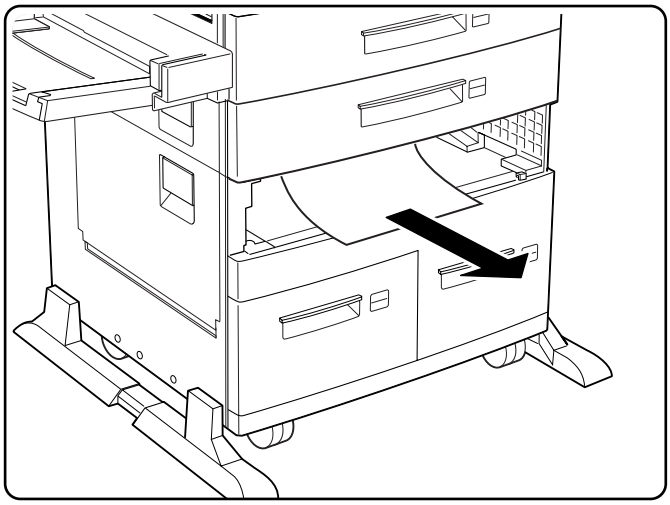
Pull out Tray 1. Check the paper feed area and carefully pull out any jammed paper found there.

Clearing Paper Jams from Tray 2

Pull out Tray 2. Check the paper feed area and carefully pull out any jammed paper found there.

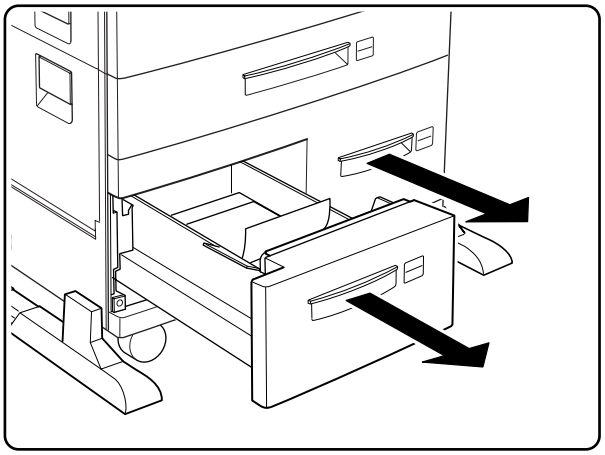
Clearing Paper Jams from Trays 3, 4 and 5 in the HCF unit

1. Pull out Tray 3 of the HCF unit. Check the paper feed area and carefully pull out any jammed paper found there.

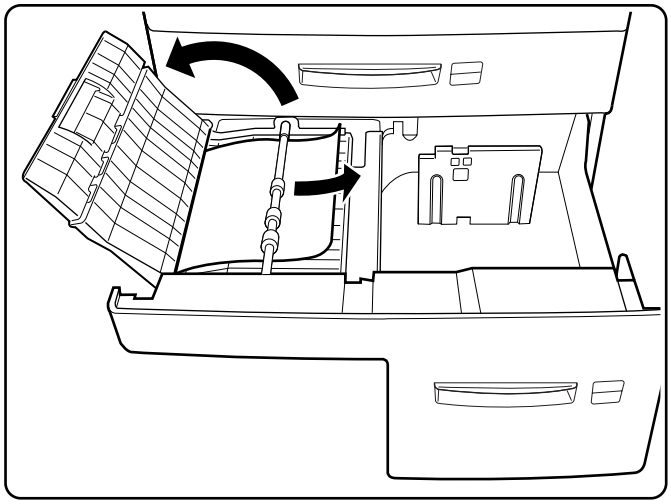


Carefully close Tray 3.

2. Pull out Trays 4 and 5.



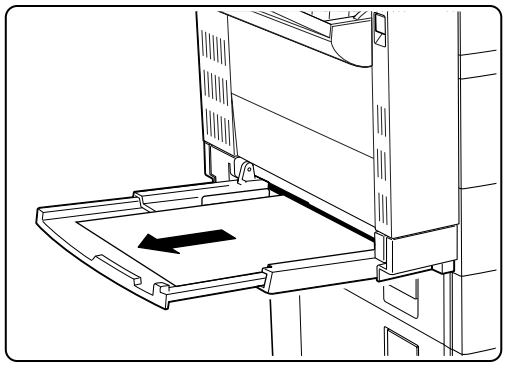
3. Check the paper feed area of Tray 5 and remove any jammed paper found



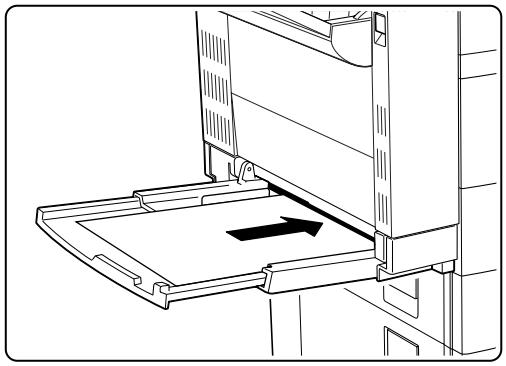
4. Carefully close Trays 4 and 5

Clearing Paper Jams from the Multi-Bypass Feeder (MBF)

1. Remove the jammed paper by pull it out in the direction of the arrow as shown.

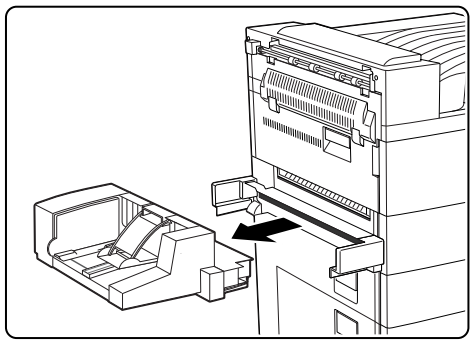


2. Remove all the paper and load the stack again.

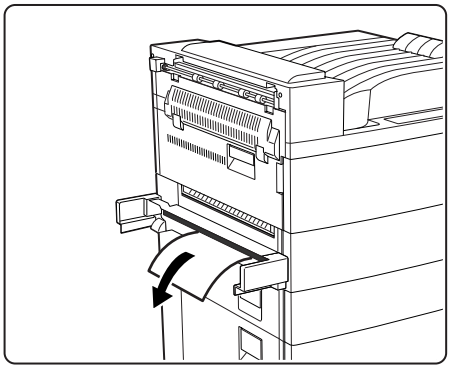


Clearing Paper Jams from the Envelope Feeder

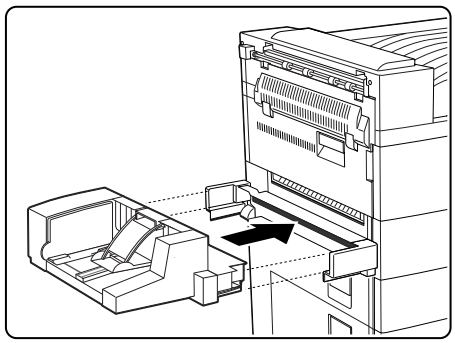
1. Remove the envelope feeder.



2. Remove any jammed paper found.



3. Re-insert the envelope feeder.



Control Panel LCD Messages

LCD messages involving troubleshooting are classified into nine numeric code classes (1 through 9) and an additional alphanumeric class. These code classes have no significance to you as a user of this printer. These class codes are designed specifically for assisting service and repair personnel. When reporting problems make note of the error message by code class.

Code Class 1

LCD MESSAGE (LINE 1)	LCD MESSAGE (LINE 2)	CAUSE OF ERROR MESSAGE	REQUIRED ACTION
1-1 MAIN MOTOR	CALL SERVICE	Main Motor Rotation Failure	Service Call required
1-1 PAPER JAM	CLEAR AREA A	Paper jam in Area A	Clear Paper Jam in Area A
1-1 TRAY ERROR	CHECK TRAY 1	Tray 1 trouble (see note 1)	Ensure that Tray 1 is loaded correctly and securely closed.
1-2 TONER EMPTY	REPLACE TONER	Toner cartridge Empty	Replace Toner Cartridge
1-2 PAPER JAM	CLEAR AREA A	Paper jam in Area A	Clear Paper Jam in Area A
1-2 TRAY ERROR	CHECK TRAY 2	Tray 2 trouble (see note 1)	Ensure that Tray 2 is loaded correctly and securely closed.
1-3 FEED ERROR	AREA A/TRAY 1	Tray 1 paper misfeed	Clear paper misfeed from Tray 1, Area A
1-3 LVPS FAN	CALL SERVICE	LVPS FAN Rotation Failure	Service Call required
1-3 PAPER JAM	CLEAR AREA A	Paper jam in Area A	Clear Paper Jam in Area A
1-3 TRAY ERROR	CHECK TRAY 3	Tray 3 trouble (see note 1)	Ensure that Tray 3 is loaded correctly and securely closed.
1-4 DRUM MOTOR	CALL SERVICE	Drum Motor Rotation Failure	Service Call Required
1-4 TRAY ERROR	CHECK TRAY 4	Tray 4 trouble (see note 1)	Ensure that Tray 4 is loaded correctly and securely closed
1-5 TRAY ERROR	CHECK TRAY 5	Tray 5 trouble (see note 1)	Ensure that Tray 5 is loaded correctly and securely closed.
1-6 PAPER JAM	CLEAR AREA A	Paper jam in Area A	Clear Paper Jam in Area A

Code Class 2

LCD MESSAGE (LINE 1)	LCD MESSAGE (LINE 2)	CAUSE OF ERROR MESSAGE	REQUIRED ACTION
2-2 FEED ERROR	AREA B / TRAY 2	Tray 2 paper misfeed	Clear paper misfeed from Tray 1 or Area A
2-3 FEED ERROR	CLEAR AREA A	Tray 2 paper misfeed	Clear paper misfeed from Tray 2 or Area A
2-7 DUPLEX COMM	CALL SERVICE	Duplexer Communications failure (see note 2)	Check Duplexer Cabling – Service Call required
2-8 DUPLEX ERROR	CALL SERVICE	Wrong model duplexer installed	Service Call required

Code Class 3

LCD MESSAGE (LINE 1)	LCD MESSAGE (LINE 2)	CAUSE OF ERROR MESSAGE	REQUIRED ACTION
3-1 NO CARTRIDGE	RESET TONER CART	Toner cartridge not set correctly	Reset Toner Cartridge
3-1 FEED ERROR	AREA B / TRAY 3	Tray 3 paper misfeed	Clear paper misfeed from Tray 3 or Area B
3-1 PAPER JAM	CLEAR AREA A	Paper jam in Area A	Clear Paper Jam in Area A
3-1 ROS ERROR	CALL SERVICE	ROS ASIC Failure	Service Call required
3-2 FEED ERROR	CLEAR AREA B	Tray 3 paper misfeed	Clear paper misfeed from Area B
3-3 FEED ERROR	CLEAR AREA B	Tray 3 paper misfeed	Clear paper misfeed from Area B
3-3 ROS ERROR	CALL SERVICE	Beam detect interval too long	Service Call required
3-4 ROS ERROR	CALL SERVICE	Beam detect interval too short	Service Call required
3-5 ROS ERROR	CALL SERVICE	ROS Motor Rotation Failure	Service Call required
3-6 PAPER JAM	CLEAR AREA A	Paper jam in Area A	Clear Paper Jam in Area A

Code Class 4

LCD MESSAGE (LINE 1)	LCD MESSAGE (LINE 2)	CAUSE OF ERROR MESSAGE	REQUIRED ACTION
4-0 FEED ERROR	AREA C/TRAY 4	Tray 4 paper misfeed	Clear paper misfeed from Tray 4 or Area C
4-1 FEED ERROR	AREA C/AREA B	Tray 4 paper misfeed	Clear paper misfeed from Tray 4, Area C or Area B
4-1 FUSER ERROR	CALL SERVICE	Fuser temperature setting out of control (On Time Fail)	Service Call required
4-1 IRREG. PAPER	CHECK TRAY 1	Irregular paper in Tray 1 (see note 1)	Ensure the correct paper is loaded in Tray 1
4-1 PAPER JAM	CLEAR AREA A	Paper jam in Area A	Clear Paper Jam in Area A
4-2 FEED ERROR	AREA C/AREA B	Tray 4 paper misfeed	Clear paper misfeed from Tray 4, Area C or Area B
4-2 FUSER ERROR	CALL SERVICE	Fuser overheat trouble detected	Service Call required
4-2 IRREG. PAPER	CHECK TRAY 2	Irregular paper in Tray 2 (see note 1)	Ensure the correct paper is loaded in Tray 2
4-2 PAPER JAM	CLEAR AREA A	Paper jam in Area A	Clear Paper Jam in Area A
4-3 FEED ERROR	CLEAR AREA B	Tray 4 paper misfeed	Clear paper misfeed from Tray 4 or Area B
4-3 FUSER ERROR	CALL SERVICE	Outboard Fuser temperature cannot be monitored	Service Call required
4-3 IRREG. PAPER	CHECK TRAY 3	Irregular paper in Tray 3 (see note 1)	Ensure the correct paper is loaded in Tray 3
4-3 PAPER JAM	CLEAR AREA A	Paper jam in Area A	Clear Paper Jam in Area A
4-4 FUSER ERROR	CALL SERVICE	Inboard Fuser temperature cannot be monitored	Service Call required
4-4 IRREG. PAPER	CHECK TRAY 4	Irregular paper in Tray 4 (see note 1)	Ensure the correct paper is loaded in Tray 4

4-5 FUSER ERROR	CALL SERVICE	Abnormally high Fuser temperature	Service Call required
4-5 IRREG. PAPER	CHECK TRAY 5	Irregular paper in Tray 5 (see note 1)	Ensure the correct paper is loaded in Tray 5
4-5 PAPER JAM	CLEAR AREA A	Paper jam in Area A	Clear Paper Jam in Area A
4-6 PAPER JAM	CLEAR AREA A	Paper jam in Area A	Clear Paper Jam in Area A
4-9 FUSER ERROR	CALL SERVICE	Fuser fan defective	Service Call required
4-11 FINISH JAM	CLEAR AREA E	Paper didn't pass TRANSPORT entry sensor in specified time after reaching the sensor	Clear paper jam in Area E
4-12 FINISH JAM	CLEAR AREA E	Paper didn't reach TRANSPORT entry sensor in specified time after passing fuser exit sensor	Clear paper jam in Area E
4-13 FINISH JAM	CLEAR AREA E	TRANSPORT entry sensor switched on while initializing finisher	Clear paper jam in Area E
4-16 FINISH JAM	CLEAR AREA E	Remaining paper detected at TRANSPORT entry sensor	Clear paper jam in Area E
4-21 FINISH JAM	CLEAR AREA F	Paper didn't pass TRANSPORT exit sensor in specified time after reaching the sensor	Clear paper jam in Area F
4-22 FINISH JAM	CLEAR AREA F	Paper didn't reach TRANSPORT exit sensor in specified time after passing the TRANSPORT exit sensor.	Clear paper jam in Area F
4-23 FINISH JAM	CLEAR AREA F	TRANSPORT exit sensor switched on while initializing finisher	Clear paper jam in Area F

4-26 FINISH JAM	CLEAR AREA F	Remaining paper detected on TRANSPORT exit sensor	Clear paper jam in Area F
4-31 FINISH JAM	CLEAR AREA F	Paper does not pass finisher input path sensor within specified time after reaching the sensor	Clear paper jam in Area F
4-32 FINISH JAM	CLEAR AREA F	Paper does not reach finisher input path sensor in specified time after reaching TRANSPORT exit sensor	Clear paper jam in Area F
4-36 FINISH JAM	CLEAR AREA G	Remaining paper detected on finisher input path sensor	Clear paper jam in Area F
4-41 FINISH JAM	CLEAR AREA G	Paper did not pass through finisher path sensor	Open finisher front cover - Clear paper jam in Area G
4-42 FINISH JAM	CLEAR AREA G	Paper did not reach finisher path sensor	Open finisher front cover - Clear paper jam in Area G
4-46 FINISH JAM	CLEAR AREA G	Remaining paper detected at finisher path sensor	Open finisher front cover - Clear paper jam in Area G
4-51 FINISH JAM	CLEAR AREA G	Paper did not pass through finisher exit path sensor	Open finisher front cover - Clear paper jam in Area G
4-52 FINISH JAM	CLEAR AREA G	Paper did not reach finisher exit path sensor	Open finisher front cover - Clear paper jam in Area G
4-56 FINISH JAM	CLEAR AREA G	Remaining paper detected at finisher exit path sensor	Open finisher front cover - Clear paper jam in Area G
4-61 FINISH JAM	CLEAR AREA H	Paper did not pass through compile tray exit path sensor	Clear paper jam in Area H
4-66 FINISH JAM	CLEAR AREA H	Remaining paper detected at compile tray exit path sensor	Clear paper jam in Area H

Code Class 5

LCD MESSAGE (LINE 1)	LCD MESSAGE (LINE 2)	CAUSE OF ERROR MESSAGE	REQUIRED ACTION
5-0 FEED ERROR	AREA C/TRAY 5	Tray 5 paper misfeed	Clear paper misfeed from Tray 5 or Area C
5-1 COVER OPEN	CLOSE COVER A	Printer cover A open	Close printer cover A
5-1 COVER OPEN	CLOSE FRONT COVER	Printer front cover open	Close printer front cover
5-1 FEED ERROR	AREA C/AREA B	Tray 5 paper misfeed	Clear paper misfeed from Tray 5, Area C or Area B
5-2 COVER OPEN	CLOSE COVER B	Printer cover B open	Close printer cover B
5-2 FEED ERROR	AREA C/AREA B	Tray 5 paper misfeed	Clear paper misfeed from Tray 5, Area C or Area B
5-3 FEED ERROR	AREA A/AREA B	Tray 5 paper misfeed	Clear paper misfeed from Tray 5, Area A or Area B
5-4 FEED ERROR	AREA C/TRAY 5	Tray 5 paper misfeed	Clear paper misfeed from Tray 5 or Area C
5-11 FIN ERROR	CALL SERVICE	Finisher Stacker tray failure (see note 3)	Service Call required
5-21 FIN ERROR	CALL SERVICE	Finisher Jogger front failure (see note 3)	Service Call required
5-22 FIN ERROR	CALL SERVICE	Finisher Jogger rear failure (see note 3)	Service Call required
5-81 FIN ERROR	CALL SERVICE	Finisher exit roller failure (see note 3)	Service Call required
5-83 FIN ERROR	CALL SERVICE	Finisher roller shift failure (see note 3)	Service Call required
5-87 FIN ERROR	CALL SERVICE	Finisher Punch failure (see note 3)	Service Call required
5-91 FIN ERROR	CALL SERVICE	Finisher Stapler failure (see note 3)	Service Call required

5-92 FIN ERROR	CALL SERVICE	Finisher Stapler head home sensor failure (see note 3)	Service Call required
5-93 FIN ERROR	CALL SERVICE	Finisher Stapler front position failure (see note 3)	Service Call required
5-94 FIN ERROR	CALL SERVICE	Finisher Stapler dual position failure (see note 3)	Service Call required
5-95 FIN ERROR	CALL SERVICE	Finisher Stapler rear position failure (see note 3)	Service Call required
5-96 FIN ERROR	CALL SERVICE	Finisher Stapler swing failure (see note 3)	Service Call required

Code Class 6

LCD MESSAGE (LINE 1)	LCD MESSAGE (LINE 2)	CAUSE OF ERROR MESSAGE	REQUIRED ACTION
6-1 COVER OPEN	CLOSE COVER C	HCF cover C open	Close HCF cover C
6-1 TONER EOL	REPLACE TONER	Toner Cartridge end-of-life	Replace Toner Cartridge
6-1 FEED ERROR	CLEAR DUPLEXER	Paper misfeed from duplexer	Clear paper misfeed from Duplexer
6-1 GATE OPEN	CHECK GATE IN	Gate Cover is open	Close Gate Cover
6-2 COVER OPEN	CLOSE DOOR F	Transport Cover is open	Close Transport Cover – Door F
6-2 RAM ERROR	CALL SERVICE	RAM Read/Write Error	Service Call required
6-3 NVRAM ERROR	CALL SERVICE	NVM breakdown	Service Call required
6-4 NVRAM ERROR	CALL SERVICE	NVM Read/Write error	Service Call required
6-5 MCU ERROR	CALL SERVICE	MCU ASIC circuit to control CRUM is defective	Service Call required
6-7 FIN ERROR	CALL SERVICE	Finisher Communications error (see note 2)	Check Finisher Cabling - Service Call required
6-8 FIN ERROR	CALL SERVICE	Wrong model finisher installed	Service Call required

Code Class 7

LCD MESSAGE (LINE 1)	LCD MESSAGE (LINE 2)	CAUSE OF ERROR MESSAGE	REQUIRED ACTION
7-1 COVER OPEN	CLOSE DOOR G	Finisher front cover is open	Close Finisher front cover – Door G
7-2 COVER OPEN	FIN. TOP DOOR	Finisher top cover open	Close Finisher top door
7-3 DUPLEX OPEN	CLOSE DUPLEXER	Duplexer cover open	Close duplexer cover
7-3 FIN EXIT SW	CHECK FIN EXIT	Finisher Exit Roller Unit is open	Close Finisher Exit Roller Unit
7-3 HCF ERROR	CALL SERVICE	Cannot Read/Write HCF NVM	Service Call required
7-4 HCF ERROR	CALL SERVICE	HCF NVM failure	Service Call required
7-7 HCF ERROR	CALL SERVICE	Communications error between MCU and HCF (see note 2)	Check HCF Cabling - Service Call required
7-71 FINISH JAM	CLEAR TOP TRAY	Paper did not pass the top tray exit path sensor	Clear paper jam finisher top tray
7-72 FINISH JAM	CLEAR TOP TRAY	Paper did not reach top tray exit path sensor	Clear paper jam finisher top tray
7-73 FINISH JAM	CLEAR TOP TRAY	Top tray exit path sensor on while finisher is being initialized	Clear paper jam finisher top tray
7-76 FINISH JAM	CLEAR TOP TRAY	Remaining paper is detected by top tray exit path sensor	Clear paper jam finisher top tray

Code Class 8

LCD MESSAGE (LINE 1)	LCD MESSAGE (LINE 2)	CAUSE OF ERROR MESSAGE	REQUIRED ACTION
8-1 FEED ERROR	CHECK ENVELOPE	Remaining paper detected in ENV area	Clear paper misfeed from Envelope Feeder
8-1 FIN DOCKING	CHECK FINISHER	Finisher docking incorrect	Check Finishing Docking
8-1 TONER TYPE	ID MISMATCH	Toner cartridge OEM ID mismatch	Replace Toner Cartridge
8-1 PAPER JAM	CHECK DUPLEXER	Paper jam in Duplexer	Clear paper jam in Duplexer
8-2 FEED ERROR	AREA A, B/TRAY 2	Remaining paper detected near Tray 2	Clear paper misfeed from or Area A, Area B or Tray 2
8-2 PAPER JAM	CLEAR DUPLEXER	Paper jam in Duplexer	Clear paper jam in Duplexer
8-3 TONER CART	RESET TONER CART	CRUM read/write error	Reset Toner Cartridge
8-3 FEED ERROR	CLEAR AREA B	Remaining paper detected near Tray 3	Clear paper misfeed from Area B
8-4 TONER CART	RESET TONER CART	CRUM Communications error	Reset Toner Cartridge
8-4 FEED ERROR	CLEAR AREA C	Remaining paper detected near Tray 4	Clear paper misfeed from Area C
8-5 TONER CART	REPLACE TONER	Invalid CRUM error	Reset Toner Cartridge
8-5 FEED ERROR	AREA C/TRAY 5	Remaining paper detected near Tray 5	Clear paper misfeed from Area C or Tray 5
8-6 FEED ERROR	CLEAR DUPLEXER	Remaining paper detected in Duplexer	Clear Duplexer
8-6 PAPER JAM	CLEAR DUPLEXER	Paper Jam in Duplexer	Clear paper jam in Duplexer

Code Class 9

LCD MESSAGE (LINE 1)	LCD MESSAGE (LINE 2)	CAUSE OF ERROR MESSAGE	REQUIRED ACTION
9-1 FEED ERROR	CHECK ENVELOPE	ENV OUT sensor time-out	Clear paper misfeed from Envelope Feeder
9-2 FEED ERROR	CHECK MBF	MBF T/A roll 1 sensor time-out	Clear paper misfeed from MBF
9-3 FEED ERROR	CLEAR AREA A	MBF or ENV Reg sensor time-out	Clear paper misfeed from Area A

Alphanumeric Code Class

LCD MESSAGE (LINE 1)	LCD MESSAGE (LINE 2)	CAUSE OF ERROR MESSAGE	REQUIRED ACTION
DRUM EOL NEARBY	N/A (WARNING ONLY)	P/R Drum end of life nearby	Ensure that you have a new P/R Drum to install soon
F/D TRAY FULL	REMOVE PAPER	Face Down Tray Paper Full	Empty output paper from Face Down Finishing Tray
FINISHER OVER LAP	REMOVE PAPER	Finisher Paper Overlap	Empty output paper from Finisher
PAPER OUT-TRAY 1	LOAD LETTER OR LOAD LEGAL OR LOAD A4 OR ETC.	No Paper in Tray 1	Add indicated paper size to Tray 1
PAPER OUT-TRAY 2	LOAD LETTER OR LOAD LEGAL OR LOAD A4 OR ETC.	No Paper in Tray 2	Add indicated paper size to Tray 2
PAPER OUT-TRAY 3	LOAD LETTER OR LOAD LEGAL OR LOAD A4 OR ETC.	No Paper in Tray 3	Add indicated paper size to Tray 3
PAPER OUT-TRAY 4	LOAD LETTER OR LOAD LEGAL OR LOAD A4 OR ETC.	No Paper in Tray 4	Add indicated paper size to Tray 4
PAPER OUT-TRAY 5	LOAD LETTER OR LOAD LEGAL OR LOAD A4 OR ETC.	No Paper in Tray 5	Add indicated paper size to Tray 5
STACKER FULL	REMOVE PAPER	Finisher Full	Empty output paper from Finisher
STACKER TOP FULL	REMOVE PAPER	Finisher Top Tray Full	Empty output paper from Finisher top tray
STAPLE CARTRIDGE	INSTALL CART.	Finisher Staple Cartridge is not installed	Install staple cartridge in Finisher
STAPLES LOW	ADD STAPLES	Finisher Staple Pin	Add staples to Finisher
TONER LOW	N/A (WARNING ONLY)	Toner Low Alert	Ensure that you have a new toner cartridge to install soon
PUNCH WASTE FULL	EMPTY WASTE BOX	The punch waste box is Full	Empty the waste in the punch waste box
NO PUNCH WASTE	INSTALL BOX	The punch waste box is not installed	Install the punch waste box

NOTE: 1: These faults are not necessarily hard faults. They only become hard faults when an attempt is made to use the "faulted" device. For these errors, the printing can continue if one simply avoids the problem. For instance, "tray trouble" faults usually indicate that the tray in question has been removed. These errors are only treated as faults when there is no alternative action to take. Your printer may be configured so that the problem is easily avoided. When the problem cannot be avoided, the described faults will be displayed.

2: The Communications Error indicates an error that requires a service call. However, before arranging for a service call, ensure that all associated cabling is correctly installed.

3: The Finisher errors are reported when an attempt is made to use the finisher.

Ethernet Network Interface Troubleshooting

This section offers various troubleshooting procedures and technical support advice for the Ethernet network interface.

Power-Up Troubleshooting

There are several possible error situations if the unit does not display the welcome message or the LEDs do not flash:

Error Messages	
Message	**Diagnosis/Remedy**
Power-up diagnostic failure (hardware failure)	Note which LED is blinking and its color, then contact your dealer or Technical Support.
The network interface boots but does not try to load the Flash ROM code	Briefly press the Test button on the network interface's I/O panel. A network interface configuration page will be printed. *(To press the Test button, you will need a pointed object - e.g. paper clip.)*
Network Error: The ACT LED will blink yellow 2-3 times per second	A. Make sure the Ethernet network cable is properly connected and reboot the server.
	B. If option A fails to resolve the problem, reload Flash ROM. Refer to the Updating Software chapter of the ***Ethernet Network Interface Reference Manual***.

Printing Problems

Area to Check	Explanation
Physical connection	To test a non-PostScript printer use the **Test Port 1 Count 100** command. This command will send 100 lines of test data to the printer.
Service characteristics	Use the **Show Service Local Characteristics** command from a network login to see if the desired service is available and to verify that the appropriate protocols are enabled on the service.
The IP address	The IP address must be unique on the network. Many problems will occur when there are duplicate IP addresses on the network.
Queue Status and Port counters	Use the **Monitor Queue** command to ensure queue entries appear in the job list. If an entry does not appear, refer to the appropriate host section in this Appendix. Use the **Monitor Port *n* Counters** command to verify that the counter is incrementing with each job. If it is not, verify the connection between the network interface and the printer.

BOOTP Troubleshooting

If the BOOTP request is failing and you have configured your host to respond to the request, check these areas:

Area to Check	Explanation
BOOTP is in your system's **/etc/services** file	BOOTP must be an uncommented line in the **/etc/services** file.
The network interface's name is in the loadhost's **/etc/hosts** file	The network interface's name must be in this file for the host to answer a BOOTP or TFTP request.
The download file is in the correct directory and is world-readable	The download file must be in the correct directory and world-readable. Specify the complete pathname for the download file in the BOOTP configuration file or, a add a default pathname to the download filename.
The network interface and host are in the same IP network	Some hosts will not allow BOOTP replies across IP networks. Either use a host running a different operating system or put the network interface in the same IP network as the host.

DHCP Troubleshooting

Area to Check	Explanation
DHCP is enabled on the network interface.	Use the **Define Server DHCP Enabled** command. If you manually enter an IP address, DHCP is automatically disabled.
Make sure the DHCP server is operational.	Check to see that the DHCP server is on and is functioning correctly.
Did the network interface get its IP address from the DHCP server?	Refer to the **DHCP Manager** on your Windows DHCP server for information about addresses currently in use. If the DHCP server does not list your network interface's IP address, there many be a problem.

RARP Troubleshooting

Area to Check	Explanation
The network interface's name and hardware address in the host's **/etc/ethers** file	The network interface's name and hardware address must be in this file for the host to answer a RARP request.
The network interface's name and IP address in the **/etc/hosts** file	The network interface's name and IP address must be in this file for the host to answer a RARP request.
The operating system	Many operating systems do not start a RARP server at boot time. Check the host's RARPD documentation for details, or use the **ps** command to see if there is a RARPD process running.

PostScript Problems

PostScript printers will silently abort jobs if they detect an error.

Area to Check	Explanation
The network interface is communicating with the printer	To test a PostScript printer use the **Test Port 1 PostScript Count 2**. This command will send 2 pages of PostScript data out the parallel port. Watch the indicators on the printer to verify that the network interface is communicating with the printer. If the printer is capable of bidirectional communication, use the **Test Service PRQ**LPSEPS_**xxxxxx_PS PostScript Count 5** command. This will transfer data both to and from the printer. Autoselection must be disabled and the printer must be configured as a PostScript printer for this test to succeed.

Area to Check	Explanation
Service Characteristics	Issue the **Show Service Characteristics** command. If the service rating is zero, the parallel port is in use. Verify that the PostScript characteristic and appropriate protocols have been enabled on the service.
Port Counters	If PostScript jobs appear to print but nothing comes out of the printer, verify the amount of data sent from the host. Issue the appropriate print command from the host system. After the job has completed, use the **Show Port 1 Counters** command.

Bitmap Graphics

If files that contain embedded bitmap graphics print incorrectly, it is because the bitmaps are being sent as actual binary data and binary data cannot be printed via serial or parallel interfaces.

Most major application packages have provisions to print using either "binary postscript" (for printers connected to the network via LocalTalk) or "hex postscript" (for printers connected to the network via a serial port or parallel port). If your application does not have this provision, ask the application vendor for an upgrade version or "patch" that will add the "hex postscript" function.

Technical Support

If you are experiencing an error that is not listed in the *Troubleshooting* appendix or if you are unable to fix the error, contact your point of purchase or Technical Support as listed in Appendix A.

When you report a problem, please provide the following information:

- Your name, and your company name, address, and phone number
- Printer model number
- Printer serial number
- Software version (use the **Show Server** command to display)
- Network configuration, including the information from a **Netstat** command
- Description of the problem
- **Debug** report (stack dump), if applicable
- Status of the unit when the problem occurred (please try to include information on user and network activity at the time of the problem).

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Chapter 7

Using DRAM DIMMs, FLASH DIMMs and Power-on Files

In this Chapter . . .

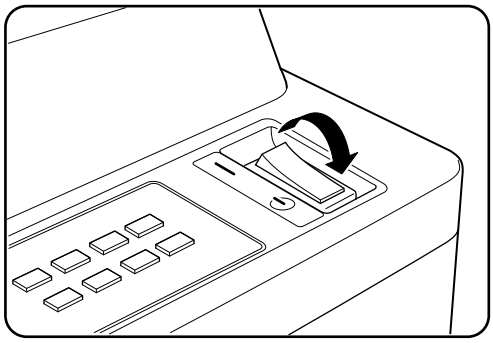
- "About this Chapter" on page 7-2
- "Installing DRAM Memory DIMMS" on page 7-2
- "Installing a FLASH DIMM Module" on page 7-5
- "Using the Power-On Files Feature" on page 7-7

About this Chapter

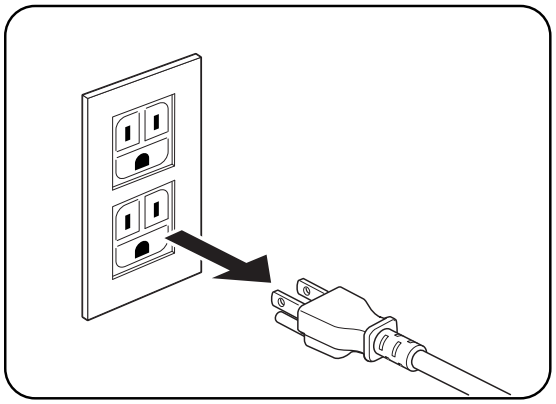
This chapter describes the procedures for installation of DRAM memory DIMMs and FLASH DIMM modules. Downloading software to the FLASH DIMM module is also discussed in this chapter.

Installing DRAM Memory DIMMS

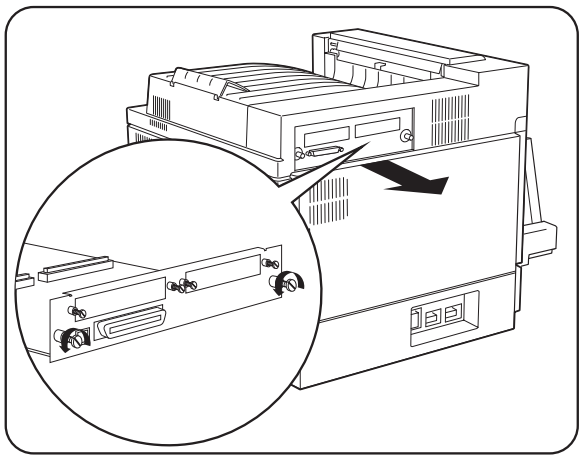
1. Ensure that the printer power switch is set to the OFF [O] position.



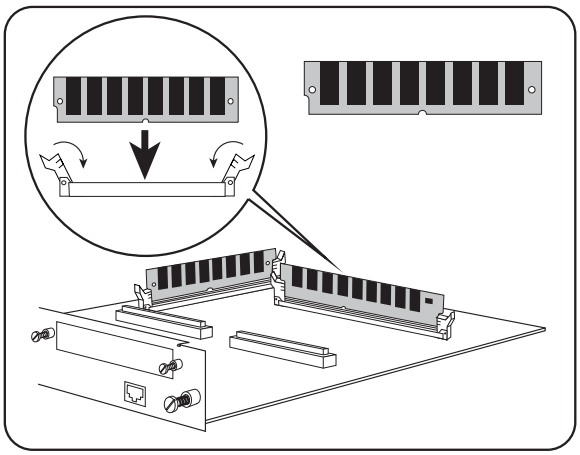
2. Disconnect the power cord from the wall outlet.



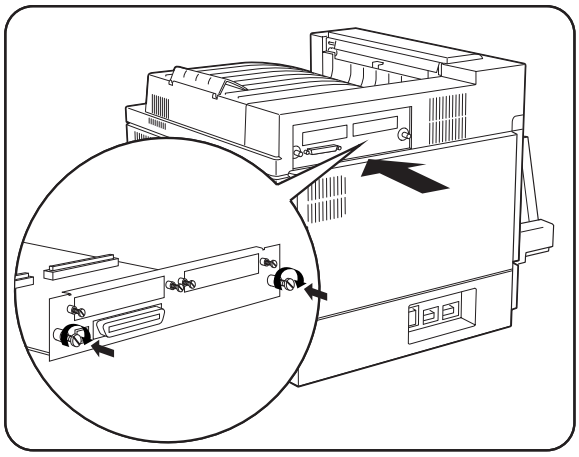
3. Turn thumbscrews on controller assembly counterclockwise until loose and gently pull controller assembly towards you to remove from printer.



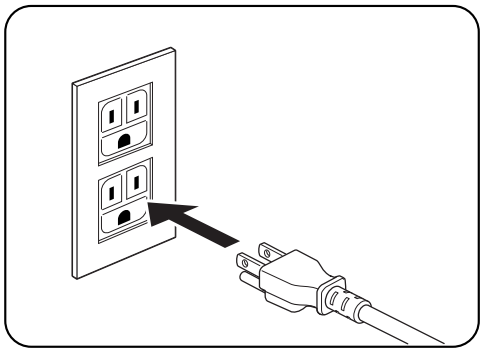
4. Carefully insert a DRAM DIMM which is compatible with your printer into any available DRAM DIMM slot as shown below. When properly seated, gently push down on the DIMM until the white braces close and snap onto the ends of the DIMM.



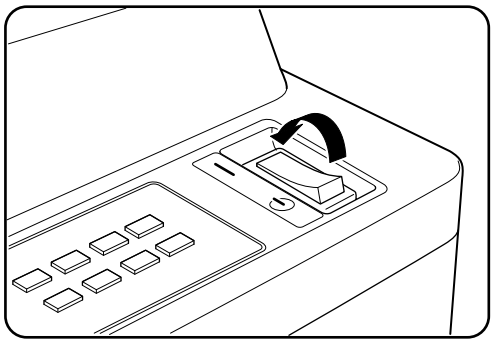
5. Reinstall the controller assembly. Once firmly in place, push and hand tighten the thumbscrews in a clockwise direction.



6. Connect the power cord to the wall outlet.

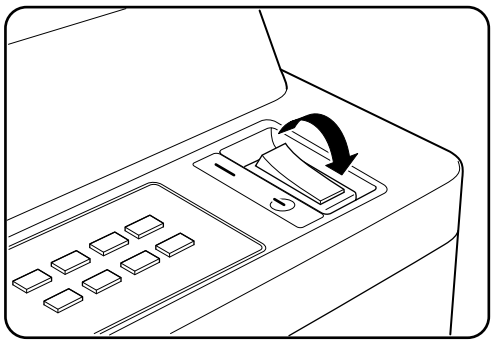


7. Turn the printer power switch to the ON [I] position.

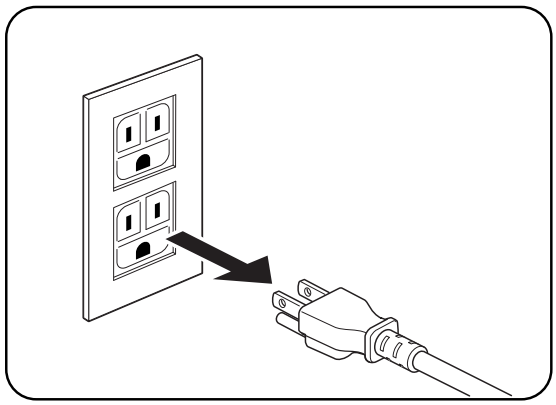


Installing a FLASH DIMM Module

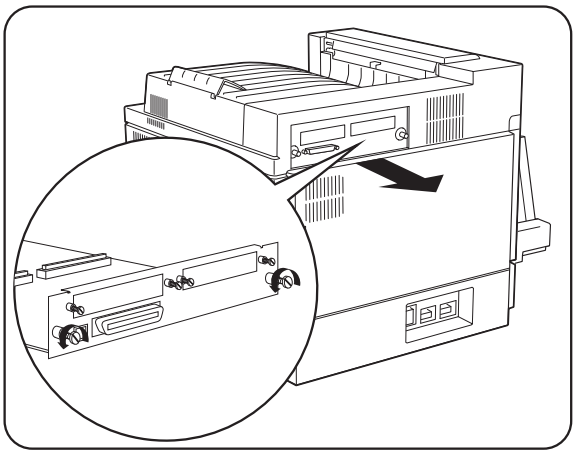
1. Ensure that the printer power switch is set to the OFF [O] position.



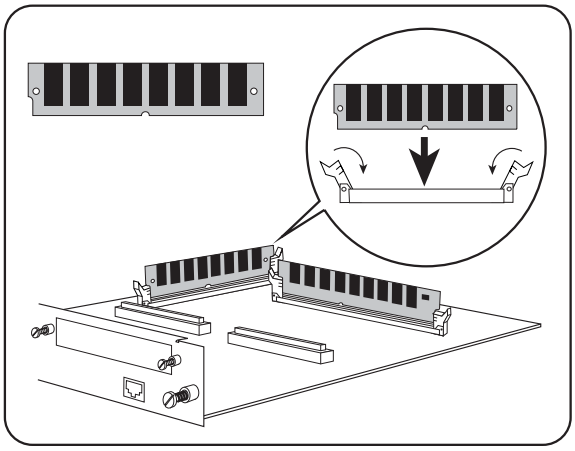
2. Disconnect the power cord from the wall outlet.



3. Turn thumbscrews on controller assembly counterclockwise until loose and gently pull controller assembly towards you to remove from printer.

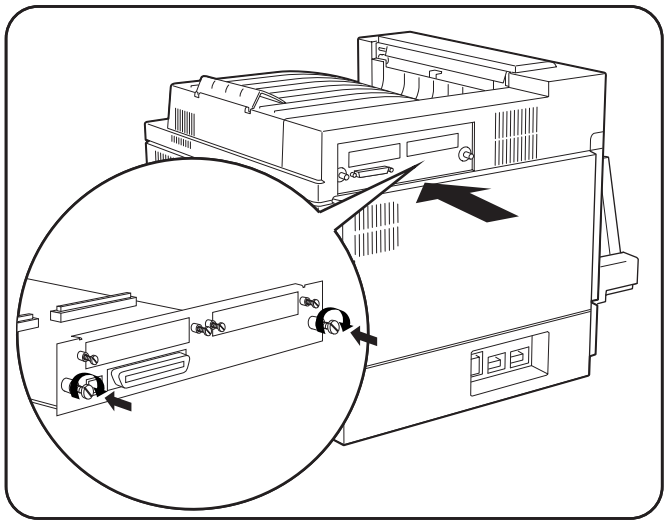


4. Carefully insert a FLASH DIMM module in FLASH DIMM slot as shown below. When properly seated, gently push down on the DIMM until the white braces close onto the ends of the DIMM.

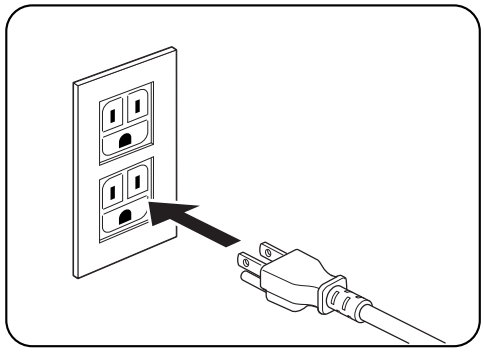


NOTE: To remove the FLASH DIMM, pull the white braces away from the ends of the DIMM until the DIMM snaps out of the slot.

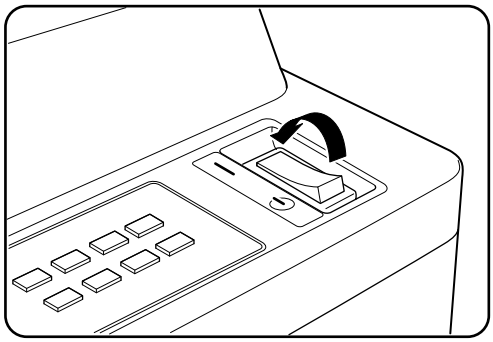
5. Reinstall the controller assembly. Once firmly in place, push and hand tighten the thumbscrews in a clockwise direction.



6. Connect the power cord to the wall outlet.



7. Turn the printer power switch to the ON [I] position.



Using the Power-On Files Feature

Power-on Files Defined

If an optional FLASH DIMM or hard disk drive is installed in your printer, your printer has the capability of storing additional power-on files which can be read and interpreted at power-on. See "FLASH Menu" on page 4-20 and "DISK Menu" on page 4-21

Power-on files can contain either PCL or PostScript language content. Examples of power-on files include soft fonts, and macro/overlay definitions. The FLASH DIMM can store approximately 8MB of file storage, the hard disk drive storage depends on the size of the drive that is installed in your printer.

NOTE: Power-on files are processed at power-on initialization only and not at the start of every print job.

Optional control panel menu selections become available when either of these options are installed and power-on files are detected. See "FLASH Menu" on page 4-20 and "DISK Menu" on page 4-21

NOTE: Contact the technical support team at your point of purchase for additional information regarding loading and using power-on files.

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Appendix A

General Information

- "About this Appendix" on page A-2
- "Specifications" on page A-2
- "Printable Area" on page A-3

About this Appendix

Provides printer specifications and information on the EP cartridge and the printable area of a page.

Specifications

Main Unit

Printing principle	Semiconductor laser beam scanning Xerography
Print speed	45 pages per minute (A4 sideways feed, identical content for printing)
Warm-up time	Max. 60 seconds after power-on or deep sleep mode (at 22° C)
Resolution	240, 400, 480, 600 dpi (fixed) 400, 480/400, 600/480, 600 dpi (variable)
Paper capacity	Multi bypass feeder: 50 sheets or up to 3/16" (5 mm high) (at 80 g/m^2)
Paper sizes	Cassette: A5 to A3 (A5 available only for cassette 1) Multi bypass feeder: Postcard up to A3
Output tray capacity	500 sheets (A4, 80 g/m^2)
Noise	During printing: max. 46 dB During standby: max. 36 dB
Power requirements	100V type: 100 V AC (min. 90 V, max. 110 V), 50/60 Hz
Power consumption	During operation: max 580 W (110 V type)
Temperature range for operation	50 to 90° F (10 to 35° C)
Humidity range for operation	15 to 85% (no condensation)
Dimensions	Base Width: 762 mm (30 in.) Depth: 520 mm (20.5 in.) Height: 486 mm (19.1 in.) Base (with HCF, and Finisher/Stapler Installed) Width: 1549 mm (61 in.) Depth: 711 mm (28 in.) Height with Finisher/Stapler in lowest position: 1092 mm (43 in.) Height with Finisher/Stapler in highest position: 1651 mm (65 in.)
Weight	about 106 lbs. (48 kg) (without paper or EP cartridge) 300 lbs. (136 kg) with Finisher
Ambient conditions for storage	Temperature: -20 to 40° C (-4 to 104° F) Temperature 15 to 85% (no condensation)
Service life	Assuming A4 size and 5% coverage: EP cartridge (10,000 page type): about 10,000 pages EP cartridge (20,000 page type): about 20,000 pages However, service life depends on print contents.

CAUTION: The EP cartridge requires special care. Failure to follow these precautions may result in poor printer performance or damage to your printer.

- Do not remove the EP cartridge from its packing until use. If it is removed, immediately put it back into the packing.
- Avoid direct sunlight. Keep the EP cartridge in the following environment:
  - Temperature: 0 to 35ºC Humidity: 15 to 80% RH (no condensation).
- Do not place the EP cartridge in a location with high temperature and high humidity.
- Do not turn the cartridge over and do not stand it on its end.
- Keep the EP cartridge away from CRT, disk drive, floppy drive, or any magnetic objects.
- Keep the EP cartridge out of reach of children.

To order an EP cartridge, contact your point of purchase.

Printable Area

Normal printing

Printable area is up to 5/32" (4 mm) from the edge of each side of a sheet of paper.

Wide printing

When the host computer issues the command for wide printing, then the printable area is from edge to edge on all sides of a sheet of paper. However, depending on the paper type, edge-to-edge printing may not be possible.

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Appendix B

Safety Notes and Regulatory Compliances

In this Chapter . . .

- "About this Appendix" on page B-2
- "Safety Notes" on page B-2
- "Regulatory Compliances" on page B-4

About this Appendix

Describes cautions to take when installing, transporting, or operating the printer. Also includes applicable regulatory compliances of your printer.

Safety Notes

WARNING: Two power specifications are listed below. The specifications that apply to your machine depend on your machine configuration. Connect the power plug only to a properly rated power outlet. Otherwise, it can cause a fire or shock hazard. If in doubt, contact your point of purchase.

Rated voltage 110V
Rated frequency 50/60Hz

Rated voltage 220-240V
Rated frequency 50/60Hz

WARNING: Never use multi-plug adaptors to plug multiple power plugs in the same outlet. Be sure to operate the machine on a sole-use receptacle. Multiple connectors can cause the outlet to overheat and cause a fire. Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous laser radiation exposure.

Power Source, Power Cord and Accessory Cable Precautions

- If you use a cord with an unspecified current rating, the machine or plug may emit smoke or become hot to the touch externally.
- Do not attempt to rework, pull, bend, chafe, or otherwise damage the power cord. Do not place a heavy object on the cord. A damaged cord can cause a fire or shock hazard.
- Never touch a power cord with wet hands. Danger of electric shock exists.
- If the power cord is broken or insulated wires are exposed, contact your point of purchase for a replacement. Using a damaged cord can cause a fire or shock hazard.
- When unplugging the machine, grasp the plug instead of the cord. Forcibly pulling on a cord can damage it and cause a fire or shock hazard.
- Be sure to switch off and unplug the machine before accessing the interior of the machine for cleaning, maintenance, or fault clearance. Access to a live machine's interior can cause a shock hazard.
- When the machine is not used over an extended period of time, switch it off and unplug it. If an unused machine is left connected to a power source for a long period, degraded insulation can cause a shock, leak current, or fire hazard.
- Once a month, unplug the machine and check the power cord for the following.
  - The power cord is plugged firmly into a receptacle.
  - The plug is not excessively heated, rusted, or bent.
  - The plug and receptacle are free of dust.
  - The cord is not cracked or frayed.

Switch off the machine before connecting the interface cable or optional accessory. Connecting the cable or accessory with a live machine can cause a shock hazard.

CAUTION: Ensure that the plug connection is free of dust. In a damp environment, a contaminated connector can draw a non-negligible amount of current that can generate heat and eventually cause a fire over an extended period of time.

CAUTION: Do not unplug or plug the machine in while it is on. Unplugging a live connector can deform the plug and cause a fire.

Location and Environment Precautions

- Do not place the machine in a hot, humid, dusty, or poorly ventilated environment. Prolonged exposure to these adverse conditions can cause a fire or shock hazard.
- When moving the machine, be sure to unplug the power cord from the outlet. If the machine is moved with the power cord connected, it can cause damage to the cord which could result in a fire or shock hazard.
- When moving the machine, do not tilt it more than 10 degrees. If tilted excessively, the machine may fall over and cause injuries.
- The machine is capable of operating normally within the following recommended environmental limits.
- Temperature range 10-35° C Humidity range15-85%(no condensation)
- Humidity should be 70% or below at 32° C and temperature should be 28° C or below at 85% humidity.
- Do not expose the machine to direct sunlight. Exposure to direct sunlight can adversely affect the machine's performance.
- For information on how to secure the printer against movement or tipping in case of an earthquake, please contact your point of purchase.
- Place the machine on a level and sturdy surface that can withstand the machine weight. If tilted, the machine may fall over and cause injuries.
- The machine weighs about 48kg. When carrying the equipment, play it safe. Get help.
- When lifting the machine, face the front panel and firmly grip the recessed areas provided on both sides of the machine. Never try to lift the machine by gripping any other areas. Lifting the machine by gripping any other areas can cause the fall of the machine, resulting in injuries.
- When lifting the machine, get a firm footing and bend your knees to avoid possible injuries to your back.

NOTE: Sudden temperature fluctuations can affect copy quality. Rapid heating of a cold room can cause condensation inside the machine, directly interfering with image transfer.

Fire, Smoke and Shock Precautions

- Do not place any liquid container such as a vase or coffee cup on the machine. Spilled water can cause a fire or shock hazard.
- Do not place any metal part such as staples or clips on the machine. If metal and flammable parts migrate into the machine, they can short internal components, and cause a fire or shock hazard.

- If debris (metal or liquid) migrates into the machine, switch off and unplug the machine. Contact your point of purchase. Operating a debris-contaminated machine can cause a fire or shock hazard.
- Never open or remove machine covers that are secured with screws unless specifically instructed in the "User's Manual."
- A high voltage component can cause a shock hazard.
- Do not try to alter the machine configuration, or modify any parts. An unauthorized modification can cause smoke or fire.
- Never throw a drum cartridge into an open flame. Toner remaining in the cartridge can cause an explosion and you can get burnt.
- Do not place a magnet near the safety switch of the machine. A magnet can activate the machine accidentally, resulting in injuries.
- Do not place any heavy object on the machine. An off-balance machine can fall over or the heavy object can fall, causing injuries.
- Do not use a highly flammable spray near the machine. It can cause a fire.
- Stop operation immediately if your machine produces smoke, excessive heat, unusual noise, or smell, or if water is spilled into the machine. These conditions can result in a fire. Immediately switch off and unplug the machine, and contact your point of purchase.
- To prevent a fire or shock hazard, follow the instruction below based on your machine configuration. If in doubt, contact your point of purchase.

CAUTION: Do not place the machine near heaters or volatile, flammable, or combustible materials such as curtains that may catch fire.

Paper Jam Precautions

- The fuser becomes very hot in operation. If a paper jam has occurred, turn the power off and wait at least 40 minutes before removing the drum cartridge and touching the fuser section.
- When clearing a jammed paper that is difficult or impossible to see, do not try to remove it by yourself. Doing so can cause injuries. Contact your point of purchase.
- When removing jammed paper, make sure that no pieces of torn paper are left in the machine. A piece of paper remaining in the machine can cause a fire.
- If a sheet of paper is not able to be removed or wrapped around the heat roller, do not try to remove it by yourself. Doing so can cause injuries. Switch off the machine immediately, and contact your point of purchase.

Regulatory Compliances

Class B Equipment

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult with the dealer or an experienced radio/television technician for help.
- Always use the power cord provided with your machine. When an extension power cord is required, always use a properly rated cord.
- In Japan: 125V/15A
- In other countries: Contact your point of purchase.

If your machine is a 220-240V model, there is no need to attach a separate earth line since the earth connection is incorporated in the power line. Plug it into a properly rated outlet.

Class 1 Laser Device and CDRH Compliance

This equipment is certified as a Class 1 laser product. This means that the machine does not emit hazardous laser radiation.

Do not try anything which is not instructed in this User's guide. An unauthorized operation can cause injuries or damage to the machine.

This equipment is in the 2nd class category (information equipment to be used in a residential area or an adjacent area thereto) and conforms to the standards set by the Voluntary Control Council For Interference by Information Technology Equipment aimed at preventing radio interference in such residential area.* When used near a radio or TV receiver, it may become the cause of radio interference. Read the instructions for correct handling.

* This regulation applies only to Japan.

This printer is certified as a Class 1 laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. This means that the printer does not emit hazardous laser radiation.

Since radiation emitted inside the printer is completely confined within the protective housings and external covers, the laser beam cannot escape from the machine during any phase of user operation.

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products on August 1976. These regulations apply to laser products marketed in the United States. The label on the printer indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.

Radio and Television Interference

When installed at a certain location, the machine may cause interference with radio and television reception. If you notice flickering or distorted images or noises on your audio-visual units, your machine may be causing radio interference.

Switch it off, and if the interference disappears, the machine is the cause of radio interference. Perform the following procedure until the interference is corrected.

- Move the machine and the TV and/or radio away from each other.
- Reposition or reorientate the machine and TV and/or radio.
- Unplug the machine, TV and/or radio, and replug them into outlets that operate on different circuits.

- Reorientate the TV and/or radio antennas and cables until the interference stops. For an outdoor antenna, ask your local electrician for support.
- Use coaxial cable antennas.

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Appendix C

Printing Font Summaries

In this Chapter . . .

- "About this Appendix" on page C-2
- "Printing a Font Summary" on page C-2
- "PostScript Font Summary" on page C-3
- "PCL Font Summary" on page C-7

About this Appendix

This appendix explains the procedure for printing summaries of PCL or PostScript fonts installed in your printer.

Printing a Font Summary

Your printer has the capability of printing summaries of all installed PCL or PostScript fonts. To print a Font Summary, follow these steps:

1. From the Ready status, press MENU, the control panel display will read:

   ```
   Menu
   Paper Menu
   ```

2. Press PREVIOUS or NEXT until the display reads:

   ```
   Menu
   Functions
   ```

3. Press SELECT, the display will read:

   ```
   Functions
   Reset Printer
   ```

4. Press NEXT or PREVIOUS until the display reads:

   ```
   Functions
   Print Fonts
   ```

5. Press SELECT, the display will read:

   ```
   Print Fonts
   PCL Fonts
   ```

NOTE: You may toggle between PCL Fonts and Postscript Fonts using the PREVIOUS or NEXT push-buttons.

6. Press SELECT. A multi page Font Summary will print.

Examples of PCL and PostScript Font Summaries follow.

PostScript Font Summary

PostScript Fonts

Font Name	Print Sample
Times-BoldItalic	abcdABCD0123456789
Univers-Bold	abcdABCD0123456789
Univers-CondensedBold	abcdABCD0123456789
AntiqueOlive-Compact	abcdABCD0123456789
NewCenturySchlbk-BoldItalic	abcdABCD0123456789
Univers-Oblique	abcdABCD0123456789
Coronet-Regular	abcdABCD0123456789
Optima-BoldItalic	abcdABCD0123456789
Clarendon-Light	abcdABCD0123456789
Apple-Chancery	abcdABCD0123456789
Carta	abcdABCD0123456789
NewYork	abcdABCD0123456789
Bodoni-BoldItalic	abcdABCD0123456789
HoeflerText-BlackItalic	abcdABCD0123456789
Optima-Italic	abcdABCD0123456789
TimesNewRomanPS-BoldMT	abcdABCD0123456789
TimesNewRomanPS-BoldItalicMT	abcdABCD0123456789
GillSans-LightItalic	abcdABCD0123456789
NewCenturySchlbk-Roman	abcdABCD0123456789
TimesNewRomanPSMT	abcdABCD0123456789
Arial-ItalicMT	abcdABCD0123456789
Helvetica-Bold	abcdABCD0123456789
GillSans	abcdABCD0123456789
Bookman-LightItalic	abcdABCD0123456789
Eurostile-ExtendedTwo	abcdABCD0123456789
GillSans-Bold	abcdABCD0123456789
Helvetica-Narrow	abcdABCD0123456789
Helvetica-Narrow-Oblique	abcdABCD0123456789
HoeflerText-Black	abcdABCD0123456789
LubalinGraph-DemiOblique	abcdABCD0123456789
Optima	abcdABCD0123456789
Oxford	abcdABCD0123456789
Univers-BoldExtObl	abcdABCD0123456789
Univers-CondensedBoldOblique	abcdABCD0123456789
Optima-Bold	abcdABCD0123456789
Univers-Extended	abcdABCD0123456789
Arial-BoldItalicMT	abcdABCD0123456789
MonaLisa-Recut	abcdABCD0123456789
AntiqueOlive-Italic	abcdABCD0123456789
Copperplate-ThirtyThreeBC	ABCDABCD0123456789
GillSans-BoldCondensed	abcdABCD0123456789
Helvetica-BoldOblique	abcdABCD0123456789
Copperplate-ThirtyTwoBC	ABCDABCD0123456789

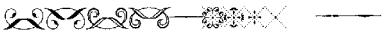
PostScript Font Summary (contíd)

PostScript Fonts

Font Name	Print Sample
Univers-Light	abcdABCD0123456789
Univers-ExtendedObl	abcdABCD0123456789
Times-Roman	abcdABCD0123456789
Goudy-BoldItalic	abcdABCD0123456789
Palatino-BoldItalic	abcdABCD0123456789
AntiqueOlive-Bold	abcdABCD0123456789
Bookman-DemiItalic	abcdABCD0123456789
Chicago	abcdABCD0123456789
Univers-BoldOblique	abcdABCD0123456789
Eurostile-BoldExtendedTwo	abcdABCD0123456789
LubalinGraph-Demi	abcdABCD0123456789
AvantGarde-DemiOblique	abcdABCD0123456789
LetterGothic-Slanted	abcdABCD0123456789
AlbertusMT-Italic	abcdABCD0123456789
Eurostile	abcdABCD0123456789
GillSans-ExtraBold	abcdABCD0123456789
ArialMT	abcdABCD0123456789
Goudy-Bold	abcdABCD0123456789
AntiqueOlive-Roman	abcdABCD0123456789
CooperBlack	abcdABCD0123456789
Univers-LightOblique	abcdABCD0123456789
Arial-BoldMT	abcdABCD0123456789
Helvetica-Condensed	abcdABCD0123456789
HoeflerText-Italic	abcdABCD0123456789
Eurostile-Bold	abcdABCD0123456789
AvantGarde-BookOblique	abcdABCD0123456789
AvantGarde-Demi	abcdABCD0123456789
HoeflerText-Regular	abcdABCD0123456789
JoannaMT-Italic	abcdABCD0123456789
LubalinGraph-BookOblique	abcdABCD0123456789
NewCenturySchlbk-Italic	abcdABCD0123456789
Bodoni	abcdABCD0123456789
GillSans-Light	abcdABCD0123456789
Helvetica-Condensed-Bold	abcdABCD0123456789
LetterGothic	abcdABCD0123456789
Monaco	abcdABCD0123456789
Palatino-Italic	abcdABCD0123456789
Univers-CondensedOblique	abcdABCD0123456789
Palatino-Roman	abcdABCD0123456789
Goudy-Italic	abcdABCD0123456789
ZapfChancery-MediumItalic	abcdABCD0123456789
JoannaMT-Bold	abcdABCD0123456789
ZapfDingbats	❁✪✻✼✡✢✣✤✐✑✒✓✔✕✖✗✘✙

PostScript Font Summary (cont'd)

PostScript Fonts

Font Name	Print Sample
CooperBlack-Italic	abcdABCD0123456789
Times-Bold	abcdABCD0123456789
Palatino-Bold	abcdABCD0123456789
Univers-Condensed	abcdABCD0123456789
Marigold	abcdABCD0123456789
Bookman-Light	abcdABCD0123456789
Helvetica	abcdABCD0123456789
Helvetica-Condensed-Oblique	abcdABCD0123456789
Bodoni-Poster	abcdABCD0123456789
Geneva	abcdABCD0123456789
Courier	abcdABCD0123456789
HoeflerText-Ornaments	
LetterGothic-BoldSlanted	abcdABCD0123456789
Tekton	abcdABCD0123456789
Helvetica-Narrow-BoldOblique	abcdABCD0123456789
Wingdings-Regular	
Univers-BoldExt	abcdABCD0123456789
AlbertusMT-Light	abcdABCD0123456789
NewCenturySchlbk-Bold	abcdABCD0123456789
Bodoni-Bold	abcdABCD0123456789
Goudy-ExtraBold	abcdABCD0123456789
TimesNewRomanPS-ItalicMT	abcdABCD0123456789
Courier-BoldOblique	abcdABCD0123456789
LubalinGraph-Book	abcdABCD0123456789
Courier-Bold	abcdABCD0123456789
Bodoni-PosterCompressed	abcdABCD0123456789
GillSans-BoldItalic	abcdABCD0123456789
LetterGothic-Bold	abcdABCD0123456789
Helvetica-Narrow-Bold	abcdABCD0123456789
StempelGaramond-Bold	abcdABCD0123456789
StempelGaramond-BoldItalic	abcdABCD0123456789
Times-Italic	abcdABCD0123456789
JoannaMT	abcdABCD0123456789
StempelGaramond-Roman	abcdABCD0123456789
JoannaMT-BoldItalic	abcdABCD0123456789
AvantGarde-Book	abcdABCD0123456789
Clarendon	abcdABCD0123456789
Helvetica-Oblique	abcdABCD0123456789
Univers	abcdABCD0123456789
Bodoni-Italic	abcdABCD0123456789
Goudy	abcdABCD0123456789
GillSans-Condensed	abcdABCD0123456789
Courier-Oblique	abcdABCD0123456789

PostScript Font Summary (contíd)

PostScript Fonts

Font Name	*Print Sample*
AlbertusMT	abcdABCD0123456789
Bookman-Demi	**abcdABCD0123456789**
Clarendon-Bold	**abcdABCD0123456789**
GillSans-Italic	*abcdABCD0123456789*
Helvetica-Condensed-BoldObl	***abcdABCD0123456789***
StempelGaramond-Italic	*abcdABCD0123456789*
Symbol	αβχδABXΔ0123456789

PCL Font Summary

PCL FONTS

Internal Scalable Typefaces and Bitmapped Fonts

Typeface	Pitch/Point	Escape Sequence	Font #	Font ID
Courier	Scale	<esc>(□<esc>(s0p▒h0s0b4099T	I 000	
Times	Scale	<esc>(□<esc>(s1p▒v0s0b4101T	I 001	
Times Bold	Scale	<esc>(□<esc>(s1p▒v0s3b4101T	I 002	
Times Italic	Scale	<esc>(□<esc>(s1p▒v1s0b4101T	I 003	
Times Bold Italic	Scale	<esc>(□<esc>(s1p▒v1s3b4101T	I 004	
Omega	Scale	<esc>(□<esc>(s1p▒v0s0b4113T	I 005	
Omega Bold	Scale	<esc>(□<esc>(s1p▒v0s3b4113T	I 006	
Omega Italic	Scale	<esc>(□<esc>(s1p▒v1s0b4113T	I 007	
Omega Bold Italic	Scale	<esc>(□<esc>(s1p▒v1s3b4113T	I 008	
Coronet	Scale	<esc>(□<esc>(s1p▒v1s0b4116T	I 009	
Clarendon	Scale	<esc>(□<esc>(s1p▒v4s3b4140T	I 010	
Univers Medium	Scale	<esc>(□<esc>(s1p▒v0s0b4148T	I 011	
Univers Bold	Scale	<esc>(□<esc>(s1p▒v0s3b4148T	I 012	
Univers Italic	Scale	<esc>(□<esc>(s1p▒v1s0b4148T	I 013	
Univers Bold Italic	Scale	<esc>(□<esc>(s1p▒v1s3b4148T	I 014	
Univers Medium Condensed	Scale	<esc>(□<esc>(s1p▒v4s0b4148T	I 015	
Univers Bold Condensed	Scale	<esc>(□<esc>(s1p▒v4s3b4148T	I 016	
Univers Medium Condensed Italic	Scale	<esc>(□<esc>(s1p▒v5s0b4148T	I 017	
Univers Bold Condensed Italic	Scale	<esc>(□<esc>(s1p▒v5s3b4148T	I 018	
Antique Olive	Scale	<esc>(□<esc>(s1p▒v0s0b4168T	I 019	
Antique Olive Bold	Scale	<esc>(□<esc>(s1p▒v0s3b4168T	I 020	
Antique Olive Italic	Scale	<esc>(□<esc>(s1p▒v1s0b4168T	I 021	
Garamond Antiqua	Scale	<esc>(□<esc>(s1p▒v0s0b4197T	I 022	
Garamond Halbfett	Scale	<esc>(□<esc>(s1p▒v0s3b4197T	I 023	
Garamond Kursiv	Scale	<esc>(□<esc>(s1p▒v1s0b4197T	I 024	
Garamond Kursiv Halbfett	Scale	<esc>(□<esc>(s1p▒v1s3b4197T	I 025	
Marigold	Scale	<esc>(□<esc>(s1p▒v0s0b4297T	I 026	
Albertus Medium	Scale	<esc>(□<esc>(s1p▒v0s1b4362T	I 027	

▒Pitch: .10 - 576 □Symbol set ▒Point size: .25 - 999.75
See your Printer User's Manual for more information.

PCL Font Summary (cont'd)

PCL FONTS

Albertus Extra Bold	Scale	<esc>(▭<esc>(s1p▩v0s4b4362T	I 028
Arial	Scale	<esc>(▭<esc>(s1p▩v0s0b16602T	I 029
Arial Bold	Scale	<esc>(▭<esc>(s1p▩v0s3b16602T	I 030
Arial Italic	Scale	<esc>(▭<esc>(s1p▩v1s0b16602T	I 031
Arial Bold Italic	Scale	<esc>(▭<esc>(s1p▩v1s3b16602T	I 032
Times New	Scale	<esc>(▭<esc>(s1p▩v0s0b16901T	I 033
Times New Bold	Scale	<esc>(▭<esc>(s1p▩v0s3b16901T	I 034
Times New Italic	Scale	<esc>(▭<esc>(s1p▩v1s0b16901T	I 035
Times New Bold Italic	Scale	<esc>(▭<esc>(s1p▩v1s3b16901T	I 036
ΑΒΧΔΕϕγηιφϒ′≥×∂÷≠≈|ℑ#∃ Symbol	Scale	<esc>(19M<esc>(s1p▩v1s3b16686T	I 037
✌✍☝☜☞✗ϒ♋≈≈✳ℯ♂✪✪ Wingdings Regular	Scale	<esc>(579L<esc>(s1p▩v1s3b31402T	I 038
Courier Bold	Scale	<esc>(▭<esc>(s0p▨h0s3b4099T	I 039
Courier Italic	Scale	<esc>(▭<esc>(s0p▨h1s0b4099T	I 040
Courier Bold Italic	Scale	<esc>(▭<esc>(s0p▨h1s3b4099T	I 041
Letter Gothic	Scale	<esc>(▭<esc>(s0p▨h0s0b4102T	I 042
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▨Pitch: .10 - 576 ▭Symbol set ▩Point size: .25 - 999.75
See your Printer User's Manual for more information.

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Appendix D

Frequently Used Ethernet Commands

In this Chapter . . .

- "About this Appendix" on page D-2
- "Server Commands" on page D-3
- "Protocol Commands" on page D-6

About this Appendix

This appendix lists some of the most frequently-used commands of the Print Server command set. More information about the command set, including additional options, can be found in the Ethernet Network Interface Manual on the *Electronic Library* CD-ROM.

Please note the following before continuing:

- In this command set appendix the NIC is referred to as the Server.
- Commands are divided into Server (general), Port, and Protocol sections. Within each section, commands are listed alphabetically.
- Commands may require privileged user status. Enter `Set Privileged`, then enter the privileged password when prompted.
- When you enter a Define or Purge command, you must reboot the Server for the command to take effect.
- When the abbreviated syntax "`{EN|DIS}`" is shown, you must choose either **Enabled** or **Disabled** to complete the command.

Each section lists additional information needed to use the command table in that section.

Server Commands

Frequently-used Server Commands		
Command	**Option(s)**	**Description**
DEFINE SERVER BOOTP {EN|DIS}		Enables or disables querying for a BOOTP host at system boot time.
DEFINE SERVER DHCP {EN|DIS}		Enables or disables querying for a DHCP host at system boot time.
DEFINE SERVER GATEWAY ipaddress		Specifies the host to be used as a TCP/IP gateway to forward packets between networks. Enter an IP address.
DEFINE SERVER INCOMING **option**	BOTH	Enables incoming LAT and Telnet connections.
	LAT	Enables only incoming LAT connections.
	NONE	Disables incoming connections.
	TELNET	Enables only incoming Telnet connections.
	PASSWORD	Causes the server to prompt for a password for all incoming connections.
	NOPASSWORD	Allows connections to be established without prompting for a password.
DEFINE SERVER IPADDRESS ipaddress		Sets the Server's network IP address.
DEFINE SERVER LOADHOST ipaddress		Specifies the TCP/IP host from which the Server requests its run-time code.
DEFINE SERVER LOGIN PASSWORD		Sets a new password that will be required before incoming logins are accepted. You will be prompted for the new password (up to 6 alphanumeric characters, case-insensitive).
DEFINE SERVER NAME "newname"		Specifies a new name for the Server. Names are restricted in length; generally a name of 11 or fewer characters is permissible.
DEFINE SERVER NETWARE LOADHOST server		Specifies the NetWare host from which the Server requests its run-time code. Enter a file server name of up to 11 characters.
DEFINE SERVER PRIVILEGED PASSWORD		Sets a new password that will be required for privileged user status. You will be prompted for the new password (up to 6 alphanumeric characters, case-insensitive).
DEFINE SERVER RARP {EN|DIS}		Enables or disables querying for a RARP host at system boot time.

Frequently-used Server Commands		
Command	**Option(s)**	**Description**
DEFINE SERVER SOFTWARE “filename”		Specifies the name or path (TCP) of the software download file. The filename can be up to 11 characters, and the pathname can be up to 26. The Server will add a “.SYS” extension.
DEFINE SERVER SUBNET MASK ipmask		Specifies the subnet mask to be used for the Server. The `ipmask` must be in **n.n.n.n** format.
HELP **option**	<nothing>	Displays a list of top-level (general) Help topics.
	<keyword>	Displays information about the keyword(s) entered. Multiple keywords must be specified in the order they occur in a command.
DEFINE SERVICE “name” PORT num		Creates a new service and associates it with the specified port.
DEFINE SERVICE “name” **option**	APPLETALK {EN|DIS}	Toggles whether the named service can be used to service networks running the specified protocol. RTEL applies to TCP/IP networks.
	LAT {EN|DIS}	
	NETWARE {EN|DIS}	
	RTEL {EN|DIS}	
DEFINE SERVICE “name” **option**	BANNER {EN|DIS}	When Enabled, causes the Server to print a banner page before jobs.
	BINARY {EN|DIS}	When Enabled, the Server will not process data passed through the service. This characteristic should be enabled when printing PCL data.
	EOJ string	Causes the Server to send an end-of-job string to the attached device after every job. Enter an end string or the word **none**.
	FORMFEED {EN|DIS}	When Enabled, causes the Server to append a formfeed to the end of LPR print jobs.
	PSCONVERT {EN|DIS}	When Enabled, causes the Server to place a PostScript wrapper around each job.
	SOJ string	Causes the Server to send a start-of-job string to the attached device before every job. Enter a start string or the word **none**.

Frequently-used Server Commands		
Command	**Option(s)**	**Description**
DEFINE SERVICE “name” **option**	TCPPORT string	Specifies a *raw* TCP listener socket for the service. Enter a socket number (4000 to 4999) or the word **none**.
	TELNETPORT string	Specifies a TCP listener socket for the service. Unlike TCPport, this option performs Telnet IAC interpretation on the data stream. Enter a socket number (4000 to 4999) or the word **none**.
INITIALIZE **option**	DELAY num	Schedules a reboot after num minutes. Enter a value from 0 to 120.
	CANCEL	Cancels an impending initialization.
	FACTORY	Reboots the server to its factory default settings.
	NOBOOT	Forces the Server to stop in Boot Configuration Mode rather than fully rebooting.
	RELOAD	Forces the Server to download new operational code and reprogram its flash-ROM.
LOGOUT **option**	<nothing>	Logs out the current port (the port that issued the command).
	PORT num	Logs out the specified port.
PURGE SERVICE **option**	LOCAL	Removes the definitions of all local services.
	“service”	Removes the definition of the specified service.
SET PRIVILEGED		Enters privileged mode, provided the user enters the proper privileged password when prompted.
{SHOW|MONITOR} QUEUE		Displays the status of Server queues once (Show) or continually every three seconds (Monitor).
{SHOW|MONITOR} SERVER		Displays Server information once (Show) or continually every three seconds (Monitor).
{SHOW|MONITOR} SERVICE **option**	<nothing>	Displays characteristics about all configured services once (Show) or continually every three seconds (Monitor).
	“service”	Displays only characteristics related to the named service.
ZERO COUNTERS **option**	ALL	Zeroes all port, node, and Server counters.
	PORT num	Zeroes port counters for the specified port.

Protocol Commands

In the following table, PROTO is an abbreviation for the optional keyword PROTOCOL

Protocol Commands		
Command	**Option(s)**	**Description**
DEFINE PROTO APPLETALK **option**	{EN|DIS}	Enables or Disables the AppleTalk protocol for the Server.
	ZONE newzone	Places the Server in a zone other than the default.
DEFINE PROTO IP **option**	{EN|DIS}	Enables or Disables the TCP/IP protocol for the Server.
	GATEWAY ipaddr	Same as *"DEFINE SERVER GATEWAY ipaddress" on page D-3*.
	IPADDRESS ipaddr	Same as *"DEFINE SERVER IPADDRESS ipaddress" on page D-3*.
	LOADHOST ipaddr	Same as *"DEFINE SERVER LOADHOST ipaddress" on page D-3*.
	NAMESERVER ipaddr	Specifies the IP address of the host that will resolve text host names into their numeric equivalents for TCP/IP connection attempts.
DEFINE PROTO LAT **option**	{EN|DIS}	Enables or Disables the LAT protocol for the Server.
DEFINE PROTO NETWARE **option**	{EN|DIS}	Enables or Disables the NetWare (IPX) protocol for the Server.
	DSCONTEXT string	Configures the NetWare Directory Services context in which the Server is located. For more information about NDS contexts, see your NDS documentation.
	DSLICENSE string	Configures the NetWare Directory Services license needed to enable NDS on your Server. Enter the license string obtained from your dealer or Lantronix.
	DSTREE string	Configures the NetWare Directory Services tree in which the Server is located. For more information about NDS trees, see your NDS documentation.
DEFINE PROTO NETWARE ENCAPSULATION **option** {EN|DIS}	NATIVE	Configures the Server to use the "native mode" frame format.
	ETHER_II	Configures the Server to use Ethernet v2 frame format.
	802_2	Configures the Server to use 802.2 frame format with NetWare SAPs.
	SNAP	Configures the Server to use 802.2 frame format with SNAP SAPs.

Protocol Commands		
Command	**Option(s)**	**Description**
DEFINE PROTO NETWARE LOADHOST server		Same as *see "DEFINE SERVER NETWARE LOADHOST server" on page D-3.*
PURGE PROTO NETWARE ACCESS **option**	ALL	Removes all entries from the NetWare access list.
	server	Removes entries from the NetWare access list that are related to the specified file server.
{SHOW|MONITOR} protocolname		Displays operating characteristics of the specified protocol.

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